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ABSTRACT

Based on a study on the future of the food service industry, volume I of this three-volume report contains a series of scenarios intended to make 10- to 15-year projections into the future of the food service industry and to serve as a basis for replanning the vocational-technical curricula in the food service area. The scenarios are "canonical variations" of the model that the authors call the "Standard World" (adapted from the Bureau of Labor Statistics Employment Model). These scenarios present descriptions of the food service industry as it is expected to be affected by different circumstances. Three scenarios are based on optimistic economic assumptions; another scenario focuses on general areas of public sector food service; two more explore pessimistic economic assumptions; still another describes the foods which will be eaten in the future; and the final scenario explores the restaurant service. A discussion of the curriculum planning needed to prepare for the projected growth and change in the food service industry concludes volume I. (BM)

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[FINAL REPORT]

THE FUTURE OF FOOD SERVICE

1985-1990

Forecasting the Future   Food Service World of Work.
Volume I

by

Thomas F. Powers, Ph.D.

Professor in Charge

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June, 1975

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The support and encouragement of Dr. Dittenhafer's immediate superior, Dr. Carroll Curtis, Director of the Research Coordinating Unit of the Pennsylvania Department of Education, was also invaluable. And Ms. Carolyn Kratz, Senior Program Specialist in Home Economics with the Pennsylvania Department of Education provided her encouragement from the very beginning. Moreover, from time to time, she also provided an informed forum for the presentation of the intermediate stages of our thinking, and without her overall support, the work presented here would never have been accomplished. (Her staff too, particularly her assistant, Glen Dean Davis, deserve our gratitude.)

Ms. Kratz took the additional initiative of supporting the original intention of harnessing the work of this project to the Commonwealth's curriculum planning purpose. As of this writing, we look forward to the prospect of working with her once more, this time in the preparation of

curriculum guidelines for secondary vocational food service programs in our state.

Collaborators in the overall project are specified, throughout the second and third volumes of this report, as the authors of the various papers for which they were responsible. They are mentioned, too, in brief "Contributor" biographies at the conclusions of those two volumes. Therefore, only a general word of thanks is due them here in the first volume. A special thanks, however, must go to Professor James Smith of the Pennsylvania State University's Economics Department. Without Jim's incredible patience as well as his mastery of the subject matter with which we had to deal, the development of the basic numerical analyses of the scenarios would simply not have been possible. The reader should know that Professor Smith dealt with an almost endless series of frustrations which would (and occasionally did) drive lesser men to distraction.

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John Swinton, who provided editorial assistance for the first year's report played a similar role in Volumes II and III of this report. John also oversaw the production of all three volumes of the present work. All of the participants are indebted to him for his help: John often led us to understand more clearly what we were trying to say as he supplied the editor's hand to the substantive work undertaken.

Mrs. Anna Mortimer conducted research related to the government scenarios and helped assemble the final reports. Her work has also been invaluable.

Numerous experts helped prepare Chapter V of this Volume, "The Active Government Scenario." At the inevitable risk of leaving someone out, the author must specifically mention at least these: Margaret Gladden, Acting Manager, Special Feeding Programs Branch, Child Nutrition Division of the Food and Nutrition Service, U. S. Department of Agriculture; Linda Regele-Sinclair of the Children's Foundation; Larry Suitor, Chief, Educational Branch, Population Division, Bureau of the Census; B. Kilmer, Professional Staff Member of the Senate Special Committee on Aging; and Charles Wells, Deputy Director, Office of State and Community Programs, Administration on Aging.

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The author's indebtedness to Stephen Danish of the Division of Individual and Family Studies of the Pennsylvania State University is only inadequately acknowledged in the References to Chapter VIII. His guidance in shaping that chapter was singularly important. Moreover, his graduate assistant, Kevin Conter, contributed in unusually productive ways in introducing the author to a field of work with which he was initially unfamiliar. Mr. Conter provided both professional expertise and personal insights based on actual observation, all of which was most helpful in developing what we hope is an important new approach to the training of food service employees.

Naturally, the author, rather than anyone he has heretofore acknowledged and thanked, bears the responsibility for whatever defects in this project may remain.

The author would also like to note his indebtedness to his colleagues in the Pennsylvania State University's Food Service and Housing Administration Program who were not directly involved in the project. All of them gave willingly of their professional expertise in shaping our ideas.

Finally, this report owes a great debt to the Williams family of Pleasant Gap, Pennsylvania. Ms. Rhoda Williams was responsible for the administration of the clerical staff that prepared early drafts as well as the final report. As it happens, that clerical staff included her sister, Bonnie Williams, and her sister-in-law, Vera Williams. In addition, Mrs. Cindy Brown provided clerical assistance, and Mrs. Ruth Kilhofer typed the mats from which this report was reproduced--an exacting task which Ruth carried out speedily, patiently, and diligently.

* * * * *

Those of us who have participated in this project feel that we have laid the groundwork for important work at all levels of Hospitality Education. Once again, the Pennsylvania Department of Education has demonstrated, almost uniquely among funding agencies, an awareness of the need to provide substance before providing form in Hospitality Education. The Research Coordinating Unit of that department has been an exacting taskmaster, but that role has been most productive for those of us who worked on this project. The effects of the work done here will certainly be felt in the immediate future of Hospitality Education and will also be felt there for many years to come.

Thomas F. Powers

June 30, 1975

University Park, Pennsylvania

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I

INTRODUCTION TO THE FOOD SERVICE SCENARIOS

I

INTRODUCTION TO THE FOOD SERVICE SCENARIOS

The Purpose of the Scenarios

In December of 1973, the Food Service and Housing Administration Program of the Pennsylvania State University, in collaboration with members of the University's faculty from the areas of Food Science, Engineering, Nutrition, Man-Environment Relations, and Economics, undertook a planning study and literature search for a project entitled "Parameters of the Future of the Food Service Industry World of Work," funded by the Research Coordinating Unit of the Pennsylvania Department of Education. The present project grows out of that study. Substantially the same elements of the University have contributed to the preparation of these scenarios of the future food service industry world of work. These scenarios are intended not only to shed the light of informed speculation on the future of food service but to serve as a basis for replanning the vocational-technical curricula in the food service area in the Commonwealth of Pennsylvania. The work recognizes "the highly traditional state of the vocational-technical curricula related to food service" (4) and the limited effectiveness of current food service education programs as reflected in a study of vocational education in Pennsylvania (6).

On Prophecy

The only thing that is certain about the future is that it hasn't happened yet. Thus, a scenario building exercise is an analytical tool intended to yield reasoned analysis rather than firm forecasts. The intention of this work is to identify the forces clearly at work today on the food service industry and to provide bracketed estimates of their effects on the food service industry in 1985. This is done by using statistical estimates of the importance of certain forces and making informal assumptions about others.

Methodology

Webster defines scenario as "the outline or synopsis of a play." The use of the term in the field that has come to be called "futures research" appears to have been first used by Kahn and Wiener in their book, The Year 2000. They identify the problems associated with long term forecasting as that of making "systematic conjectures about the future," suggesting the use of "significant baselines, statistical where possible, to project key variables in society." They define scenarios as "hypothetical sequences of events constructed for the purpose of focusing attention on causal processes. . . ." (3).

As one "futurist" has pointed out,

> In the absence of a time machine, true experimentation about the future is a logical impossibility. Data obtained from an experiment are always data about the past, and statements about the future can only be derived from them by extrapolation. Hence we have to resort to pseudo-experimentation, which means the construction of a simulation model about the future and experimentation within that model, in the hope that results thus obtained carry over to the real world of the future. (1)

The intent of the present work is to construct a series of scenarios for the purpose of examining the direction in which the food service industries are likely to move in the next ten to fifteen years. Once again, we have borrowed from the conceptual scheme employed by Kahn and Wiener, who begin by using a "surprise free projection [which is] one that seems less surprising than any specific possibility" to define a "Standard World" (SW). This Standard World is then contrasted with "several canonical variations" (Kahn and Wiener, p. 5.) Helmer phrases the problem this way:

> Considering the usually vast number of possible scenarios of the future, no specific one of which has a more than negligible chance of occurring; is it possible to single out a small, manageable set of "representative" scenarios, in the sense that any scenario is sufficiently similar, for planning purposes, to one of the representative scenarios. . . ." (1)

The standard world of the Food Service Futures Project is based in the Bureau of Labor Statistics Employment Model, (hereafter "BLS Model") adapted for the needs of this project under the direction of Dr. James Smith. A technical discussion by Smith and Schechter of the model and the adaptions made to it for this project is found in Volume III of this report. That discussion is briefly summarized below.

Food Service Futures Model. The BLS Model projects the nations total output (GNP) to 1985 based on growth of the labor force (all persons who will be in the labor force in 1985 are alive today) and alternative assumptions about the unemployment rate, average hours of work and productivity (i.e., output per unit of labor). Projected GNP is then distributed among the major users of national output: households, domestic business, government, and all foreign uses by industry. Through the use of an analytical technique known as input-output analysis, projections of the demand of such final users as consumers can be translated into output levels from various industries supplying goods and services. Industry employment is then determined in the BLS Model by translating industry output into number of workers required to produce it, given assumptions regarding output per man-hour, and annual hours per worker.

From the point of view of this study, a key output of the BLS Model is sales (measured in real dollars) in eating and drinking places (hereafter "E & D"). This output lies at the heart of the Food Service Futures Model (hereafter "Futures Model"). The Futures Model requires substantially more than estimated E & D sales and employment. Specifically, its goal is to project total food consumed away from home (hereafter "Food Away"); sales of alcoholic beverages in eating and drinking places (hereafter "E & D Bev"). This project also requires estimates of total and type of workers required to prepare Food Away (hereafter "All Food Service Workers"). Projections of work force demand derived from the BLS model were supplied us by the Bureau of Labor Statistics. The types of work roles projected are bakers, bartenders, busboys, cooks, counter workers, dietitians, dishwashers, and managers.

The projections of the Futures Model are first presented in a Standard World. In this projection, the E & D sales and E & D employment output from the BLS model are used to project the other outputs on the basis of historical relationships of Food Away, E & D Bev. The various employment figures in SW as noted above, were also supplied us by the Bureau of Labor Statistics. The background for establishing the relationships on which projections are made is discussed by Smith and Schechter in Volume III of this study.

Alternate Scenarios

The next step is to introduce canonical variations in income, the price of food away from home relative to other goods, and technology. In these alternate scenarios, the output of the Futures Model is based on the consumption behavior equations developed by Houthakker and Taylor (2).

Changes in income or relative price in the model and their effect on consumer behavior and E & D sales are determined in the Futures Model by the behavior captured in the Houthakker and Taylor equations.* Once again, the other outputs are based on historical relationships of those variables to E & D sales. In the alternate scenarios, employment estimates are derived from the Futures Model.

The function of the alternate scenarios is basically that of sensitivity analysis. In using this type of analysis in the operation of the Futures Model, the Standard World may be viewed as a "solution" to a series of simultaneous equations. In order to focus attention on the significance of different key input variables the following variables are changed: consumer income, relative prices of food service and food service worker productivity are changed. For instance, changes in consumer income and changes in the relative price level of food are found to lead to substantial changes in food service sales and employment. That is to say, the model, and (if we have captured in it the realities of the food service industry) the industry, are clearly sensitive to changes in consumer income and to changes in the price of away from home food relative to the general price level.

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*It is interesting to note that this function is also incorporated into the BLS Model.

Optimistic Scenarios. Three scenarios based on optimistic assumptions regarding the general state of the U.S. economy explore (1) the effect of more rapidly rising incomes than those found in the BLS Model; (2) unfavorable relative price trends for food service establishments (in the context, however, of the generally favorable income trends found in the BLS Model); and, (3) substantial technological change resulting in greater-than-expected improvements in productivity.

An Active Government Scenario. This scenario does not use the Futures Model for several reasons. First of all, it focuses on only one sector and, by no means, the largest one of the industry. For this reason, there is difficulty in adapting the model to this level of detail. Moreover, this sector of food service is viewed as unusually dynamic, with historical data not necessarily reflecting expected rapid change. Thus, for instance, the value of food served in State and Federal Institutions and in Institutional Food Service rose from a negligible amount in 1965 to $7.2

billion and by an additional $4.2 billion by 1969. While some of this growth may be due to statistical vagaries, it is clear that food service in these areas is of significant absolute size and is growing at a substantial rate (4). This scenario focuses on two general areas of public sector food service: the school lunch and its related programs, and congregate feeding for the elderly. Given expected sizes of the population groups affected, the effect of varying assumptions regarding participation rates on the part of the programs' clientele is explored in terms of demand for services.

Pessimistic Scenarios. Two basic pessimistic scenario groups explore the interaction of: (1) less rapidly rising consumer incomes; and (2) a higher level of relative price change for food service than for prices in the economy in general. These scenarios serve to examine the "downside risk" for both food service operators and employees.

Qualitative Variables

In the operation of the Futures Model, various assumptions regarding income, relative price level, technology and productivity are explored quantitatively in terms of their effects on demand for food service and for food service workers. This sets the stage, however, for exploring changes in work roles resulting from possible changes in food service systems and consumer demand. Thus, the work roles projected in the labor demand outputs have names which connote traditional task arrays associated with traditional roles. A number of factors, however, are seen as interacting, to suggest that the food service industry of 1985 will be a substantially different one from the food service industry of today. Specifically, for instance, factors related to centralization of food production are seen as leading to potential improvements in the quality and variety of frozen food. At the same time, the nutritional effect of centralizing food systems may pose problems in an increasingly consumer oriented society. Changes in the relative cost of animal protein might ideally lead to substitution of alternate sources of protein if consumer resistance can be overcome. Finally, it appears appropriate to explore possible emerging trends in the way servers relate to guests. Accordingly, specialists in appropriate areas have undertaken pilot studies of key factors with respect to these possible developments and, once the numerical effect of the operation of the model is reported, the scenario will proceed to look at some key assumptions or possibilities regarding the way the industry might respond and change, given changes outside it.

Work Force Projection

The BLS and Futures Models make it possible to project historical data relating several traditional types of workers to total food service workers. It is possible to project demand for such workers as cooks, bakers, bartenders, busboys, and counter workers. These job titles are general. The data was collected by the Department of Labor and the Bureau of the Census by asking the workers and the employers to specify the category of work done. Thus, for instance, cooks may include people who cook hamburgers at McDonald's as well as chefs in the finest restaurants. For these reasons, it was thought appropriate to group the data into broader categories for the purposes of this study.

The first group identified is that of production workers. This group, predominantly semi-skilled or skilled, includes bakers, cooks and bartenders; and also includes dishwashers. Secondly, a group we have identified a group we call "servers." Most of these workers are unskilled, though a minority may be semi-skilled or skilled. This group includes busboys, counterworkers, and waiters. Other workers make up a third group; and finally, managers and dietitians are grouped as a fourth class.

While this shapes the data in a manner that yields somewhat more meaning than projections of these individual roles would offer, it is clear that substantial qualification is necessary regarding the results. For instance, among servers, while busboys and counter workers are almost surely unskilled and while many waiters and waitresses are also unskilled or semi-skilled, this group includes some of the highest paid food service workers--the waiters and waitresses working in fine dining establishments. Similarly, while bakers and bartenders are probably almost all semi-skilled or skilled, cooks, as noted above, include both the sous chef of a fine restaurant as well as the "hamburger flipper" at a fast food outlet. Clearly, we are speaking of a general tendency towards skill and, given the data available, we are not able to reach a great degree of precision regarding demand for specific workers. Finally, the basis of the manpower projections are preliminary estimates supplied to us by the Bureau of Labor Statistics. While a good deal of work appears to have been done by the Bureau on them in the last six months, these estimates are subject to further study and change.

The Problem of Precision

The goal of the study must serve as the context for viewing this matter of precision. In a very general way, the question of curriculum planning is affected by the demand for different kinds of workers: if demand is not sufficient, a curriculum might be discontinued. Thus, the numerical portion of the scenarios serve the valuable purpose of indicating the need for a continuation of curricula by showing that demand for food service workers is likely to be intense in the next 10 to 15 years--as well as serving the purpose of providing bounds for conjecture regarding the food service field as both an industry and a world of work. On the other hand, the central problem of curriculum design is the identification of an appropriate knowledge base or bases. From that perspective, the exact number of servers, cooks, or managers is less relevant than the question of what they need to know. It is in this area that the non-quantifiable, qualitative elements of the scenarios are especially useful.

The Plan of the Work

The next chapter sets forth in some detail the Standard World derived from the BLS and Futures Models. Immediately thereafter, four chapters deal with the Optimistic Scenarios, the future composition of the restaurant component of the food service industry, the Active Government Scenarios, and the Pessimistic Scenarios. These chapters set the boundaries of alternate possibilities which appear to lie ahead for the Food Service Industry. Generally, at the end of each chapter a brief note suggests the implications of the scenarios in question for curriculum planning. But this is not the major focus of these chapters; rather, the concern is with exploring the effect of various changes in variables on the industry.

Next a chapter will explore the potential effect of problems related to the phenomenon of "new food." Considerations of curriculum planning will have more prominence here but will still be of a secondary nature. The following chapter will explore the server-guest relationship and consider possible changes which might be appropriate in our approach to training servers. A final chapter concludes the present volume, providing a summary and overview of the scenarios and drawing together the implications of the project for curriculum planners.

It is also appropriate to note, here, that there are two additional volumes to this report. The second volume, entitled "Centralized Food Service Systems," explores the operational issues of a change toward centralized production facilities including both productivity changes and problems related to microbiological control as well as the legal and regulatory ramifications of entry of Food Service firms into interstate commerce. Finally, that volume considers transportation and distribution issues related to system change.

The third volume, entitled "Technical Papers on the Food Service Industry's Future," contains the technical reports of each of the specialists participating in the project on which, in part, this first volume is based.

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II

THE STANDARD WORLD OF 1985

II

THE STANDARD WORLD OF 1985

As noted in the previous chapter, the Standard World (hereafter "SW") is a "surprise-free projection, one that seems less surprising than any other specific possibility." (2) The SW uses the Bureau of Labor Statistics Employment Model (BLS Model) as a basis for the Food Service Futures Model (Futures Model), also described in the previous chapter. (A technical discussion of the BLS and Futures Models by Smith and Schechter can be found in Volume III of this report.) The output of these models for the Standard World are projections of population, consumption, total sales of food away from home (Food Away), food sales in eating and dining places (Food E & D), alcoholic beverage sales in eating and drinking places (Bev. E & D). Estimates of manpower demand based on the BLS Model and supplied to us by the Bureau of Labor Statistics are used in this chapter. These include total food service workers (FS Workers) and workers in eating and drinking places (Workers, E & D) as well as projections for several specific occupations which are grouped in the report as production workers, service workers, other workers and managers.

Income Projections

Before examining the SW projection it is useful to consider the principle factors leading to change in demand for food service. The first basic force for change is population. As Table 2.1 indicates, population is projected to increase from 209 million in 1972 to 241 million by 1985, an increase of 31 million or 15 percent.

Table 2.1

Projected U. S. Population
1972 - 1985

Year	Population
1972	209.17
1973	211.25
1974	213.39
1975	215.59
1976	217.85
1977	220.16
1978	222.54
1979	224.99
1980	227.51
1981	230.09
1982	232.74
1983	235.43
1984	238.16
1985	240.93

A second major force is personal income. Income in the United States has been growing at a rate of between 2 and 4 percent in the past 20 years (1). Table 2.2 shows the projected effect of growth rates of 2, 3, and 4 percent in family incomes.

In 1971, just over half the population had incomes in excess of $10,000 but assuming, for instance, a 3 percent growth rate, 66 percent of families in the United States in 1985 would have such incomes, and the average income would rise from $11,583 to just under $15,000 (in constant 1971 dollars). The contrast is even more striking for upper income groups. In 1971, just under 25 percent of families had incomes of $15,000 or more, but a growth rate of 3 percent in family incomes (in constant dollars) would see a shift to 41 percent of families with such incomes while the proportion of families with incomes in excess of $25,000 would more than double.

Table 2.2

Per Cent Distribution of Families
By Money Income, 1971 and
1985 Projected
(Constant 1971 Dollars)

	1971 (Actual)	1985 Growth Rates 2.0	3.0	4.0
Under $4,000	13.0%	10.0%	8.6%	7.4%
$4,000 - $9,999	35.2	28.7	25.5	22.5
$10,000 - $14,999	26.9	26.4	24.8	23.0
$15,000 - $24,999	19.5	26.1	29.3	23.5
$25,000 and over	5.3	8.9	11.9	15.6
Median Income	$10,281	12,069	13,259	14,385
Mean Income	$11,583	13,673	14,928	16,284

The significance of such changing income patterns as these is highlighted by data recently released by the Bureau of Labor Statistics on the 1972-1973 Survey of Consumer Expenditures (3). Table 2.3 demonstrates that as family income rises, the proportion of the family's food budget spent on food away from home rises dramatically, with the size of the proportionate increase growing larger at the higher end of the income scale. Thus, families with incomes of from $5,000 to $6,900 spend just over 22 percent

Table 2.3

Total Food and Food Away from Home Expenditures, by Family Income

Family Income	Weekly Expenditure		Food Away % of Total
	Total Food Excluding Alcoholic Beverages	Food Away From Home	
Under $1875	$12.37	$ 1.96	15.8%
$1875-$3399	17.64	2.96	16.8
3400- 5000	22.11	4.22	19.1
5001- 6899	25.74	5.82	22.6
6900- 8749	29.34	7.18	24.5
8750-10499	32.01	8.27	25.8
10500-12549	36.61	9.85	26.9
12550-15199	38.73	10.89	28.1
15200-19474	43.75	13.81	31.6
19475 and over	52.69	18.65	35.4
All Families	$30.32	$ 8.15	26.9%

of their food budget away from home. That proportion rises to 26.9 percent for families with incomes of from $10,500 to $12,550 while families with incomes of between $15,200 and $19,474 spend 31.6 percent. While these data do not show how families behave with respect to food purchases away from home in the face of income changes within a particular family, the proportion of family income spent on food away from home for families with incomes over $10,000 has remained relatively stable since the 1962 Survey of

Consumer Expenditures, lending support to the notion that a shift toward higher real incomes will result not only in an absolute but also in a proportionate increase in food purchasing away from home.

Consumption and Demand for Food Services

The Futures Model projects consumption expenditures to increase from $72.5 billion in 1972 to $1.3 trillion in 1985, an increase of 79 percent, while per capita consumption expenditures are expected, in a surprise free projection, to increase from $3,473 to $5,411 or 56 percent. (See Table 2.4)

Table 2.4

Projected Total and Per Capita Consumption Expenditures

1972 - 1985
(1972 Constant Dollars)

Year	Total Consumption Expenditures (000 omitted)	Per Capita Consumption Expenditures
1972	$ 726,500	$ 3,473
1973	759,919	3,597
1974	794,874	3,725
1975	831,440	3,857
1976	869,686	3,992
1977	909,691	4,132
1978	951,537	4,276
1979	995,308	4,424
1980	1,041,091	4,576
1981	1,088,981	4,733
1982	1,139,074	4,894
1983	1,191,471	5,061
1984	1,246,278	5,233
1985	1,303,606	5,411

The model projects that total sales in eating and drinking places will grow from $26.4 billion in 1972 to $43.0 billion in 1985, an increase of 62.5 percent. Assuming continuation of past trends, the market for eating and drinking places will grow substantially in absolute and relative levels compared to the 1972 base. Alcohol consumed in eating and drinking places will increase from $8.5 billion to $13.9 billion. (See Table 2.5) Total food consumed away from home is projected to increase from $40.4 billion to $65.6 billion, an increase of $25.2 billion in the fourteen-year period. (See Table 2.6)

Assuming the continuation of historical trends, the model projects that average purchases in eating and drinking places will decline from 3.6 percent of per capita consumption expenditures to 3.3 percent in 1985 while per capita expenditures for food consumed away from home is projected to increase 41 percent from $193.08 to $272.42. Per capita consumption of food away from home would thus decline from 5.6 to 5 percent of personal consumption expenditures. Per capita expenditures on food in eating and drinking places is projected to increase 41 percent while total consumption expenditures are shown to be rising by 56 percent. (See Table 2.7)

Table 2.5

Projected Food Sales; Alcoholic Beverage Sales; and Total Sales in Eating and Drinking Places

1972 - 1985
(1972 Constant Thousands of Dollars)

Year	Food Sales	Alcoholic Beverage Sales	Total Sales
1972	$26,440,660	$ 8,533,757	$34,974,417
1973	27,512,750	8,879,779	36,392,529
1974	28,583,380	9,225,326	37,808,706
1975	29,667,360	9,575,178	39,242,538
1976	30,776,120	9,933,033	40,709,153
1977	31,918,440	10,301,710	42,220,150
1978	33,101,670	10,683,600	43,785,270
1979	34,331,470	11,080,520	45,411,990
1980	35,612,820	11,494,080	47,106,900
1981	36,950,980	11,925,970	48,876,950
1982	38,350,670	12,377,730	50,728,400
1983	39,817,290	12,851,080	52,668,370
1984	41,355,850	13,347,650	54,703,500
1985	42,971,590	13,869,130	56,840,720

Table 2.6

Projected Total Sales of Food Away from Home

1972 - 1985
(1972 Constant Thousands of Dollars)

Year	Total Food Away
1972	$40,385,920
1973	42,023,450
1974	43,658,750
1975	45,314,430
1976	47,007,970
1977	48,752,770
1978	50,560,060
1979	52,438,470
1980	54,395,630
1981	56,439,560
1982	58,577,470
1983	60,817,620
1984	63,167,630
1985	65,635,540

Table 2.7

Projected Per Capita Total Food Service Sales and Per Capita Sales in Eating and Drinking Places

1972 - 1985
(1972 Constant Thousands of Dollars)

Year	Per Capita Total	Per Capita E & D
1972	193.08	126.41
1973	198.93	130.24
1974	204.60	133.95
1975	210.11	137.61
1976	215.78	141.28
1977	221.44	144.98
1978	227.11	148.74
1979	233.07	152.59
1980	239.09	156.53
1981	245.29	160.59
1982	251.69	164.78
1983	258.33	169.13
1984	265.66	173.64
1985	272.43	178.36

Work Force

Total workers in all food service establishments are shown as increasing from 4 million to 6.5 million, an increase of 62.4 percent, while workers in eating and drinking places are shown with an increase of 61.8 percent. These changes are summarized in Table 2.8.

Table 2.8

Projected Total Food Service Work Force and Workers in Eating and Drinking Places

1972 - 1985
(000 omitted)

Year	Total	E & D
1972	$4,014	$2,706
1973	4,172	2,807
1974	4,336	2,916
1975	4,502	3,028
1976	4,675	3,143
1977	4,852	3,261
1978	5,036	3,384
1979	5,226	3,510
1980	5,423	3,641
1981	5,627	3,777
1982	5,838	3,918
1983	6,057	4,064
1984	6,285	4,216
1985	6,521	4,373

Total production workers increase from 1,420,000 to 2,052,000, a 44.5 percent increase; while service workers are projected to increase by a somewhat smaller percent of from 1,574,000 to 2,254,000, or 42.3 percent. Other workers are projected to triple from 454,000 to 1,140,000, an increase of 151 percent. Management employees are projected to increase from 547,000 to 1,034,000, an increase of 89 percent. These changes are summarized in Table 2.9.

Table 2.9

Demand for Food Service Workers by Occupational Category

1972 and 1985
(000 omitted)

	1972	1985	% Change
Production Workers			
Bakers	125	128	+ 2 %
Bartenders	205	340	65
Cooks	876	1,317	50
Dishwashers	214	267	24
	1,420	2,052	44.5%
Servers			
Waiters & Waitresses	1,152	1,582	37
Counter Workers	303	477	57
Bus Boys	119	195	63
	1,574	2,254	42.3%
Management			
Managers	515	986	91
Dietitians	32	48	50
	547	1,034	89.0%
Others	454	1,140	151.1%
All Food Service Workers	4,014	6,520	62.4%

Implications for Curriculum Planning

The traditional roles of the food service industry are projected to grow substantially slower than the total food service work force. Table 2.9 shows both Production Workers and Servers growing by less than 45 percent, while the total food service work force is expected to grow by 62.4 percent. The fastest growing group is "Others." This situation appears to reflect the fact that job titles and arrangements of duties that have not yet worked their way into the Bureau of Labor Statistics job classification scheme are growing very rapidly. It seems likely that this does not represent growth in new food service skills as much as it represent a rearrangement of the way skills are configured in work roles. Most, if not all of the miscellaneous jobs grouped under "Others" are unskilled.

Another very significant conclusion from Table 2.9 is that the demand for management personnel should encourage students to invest time and effort as well as money in post secondary education. Food service curricula at the secondary level should take account of the need to prepare students for further study in two- and 4-year programs as well as for entry into the work force. The increase in the number of managers reflects the shift away from traditional restaurants employing relatively large numbers of workers and, in proportion to that work force, a relatively small number of managers. A fast food establishment may need many fewer workers, but it requires, just like the older system, at least one management person per shift. Table 2.10 contrasts, in a very rough way, the staffing pattern of a 200-chair traditional restaurant with that of a fast food establishment. It is self evident that, in the food service industry, as in other industries, a shift toward capital intensity and higher worker productivity is accompanied by a move toward closer supervision of employees. Much of the growth in employment appears to be in unskilled jobs.

Finally, the prospects for growth in food service employment--nearly triple the 22 percent rate of growth projected by the Bureau of Labor Statistics for the work force as a whole--clearly support the notion that programs preparing students for this kind of employment will be preparing students for a field that will offer positions. The projected forced draft growth in employment in this field also suggests that food service wages must be raised if workers are to be attracted into this field in sufficient numbers.

Table 2.10

Typical Staffing Configuration
Traditional 200-Chair
and
Fast Food Restaurants

Employee Roles for a Single Shift	Traditional Restaurant	Fast Food
Waitresses	12 - 14	-
Counter Workers	-	3 - 4
Cooks	4 - 6	2 - 3
Dishroom	2 - 3	-
Cashier	1	-
Hostess	1	-
Total Employees	20 - 25	5 - 7
Shift Manager	1	1

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III

THE OPTIMISTIC FOOD SERVICE SCENARIOS

III

THE OPTIMISTIC FOOD SERVICE SCENARIOS

The three scenarios discussed in this chapter are grouped together because they all take a relatively optimistic view of the state of the economy and assume that at least the Standard World assumptions regarding aggregate demand will obtain. The first set of scenarios explores assumptions of higher income. The second considers the possibility of food service prices rising more rapidly than other prices--but does so in the light of optimistic assumptions regarding income and consumption levels in the economy as a whole. Finally, the possibility of rapid improvements in technology are explored in terms of the effect of improved productivity on demand for food service workers.

High Income Scenarios

To explore the impact of a relatively more bouyant economy on the industry, the Futures Model simulated income growth at 10 percent and 20 percent greater rates than assumed in the Standard World (SW). Table 3.1 shows the increase projected in consumption expenditures under these two assumptions in contrast to the assumption of the SW. SW

Table 3.1

Projected Consumption Expenditures High Income Scenarios

1972 - 1985
(Constant Dollars - 000 Omitted)

Year	Standard World	High Income (10%)	High Income (20%)
1972	$ 726,500	$ 726,500	$ 726,500
1973	759,919	763,260	766,602
1974	794,875	801,881	808,919
1975	831,440	842,457	853,571
1976	869,686	885,085	900,688
1977	909,691	929,870	950,406
1978	951,537	976,922	1,002,869
1979	995,308	1,026,354	1,058,227
1980	1,041,091	1,078,287	1,116,641
1981	1,088,981	1,132,848	1,178,279
1982	1,139,074	1,190,170	1,243,320
1983	1,191,471	1,250,392	1,311,951
1984	1,246,278	1,313,661	1,384,370
1985	1,303,606	1,380,132	1,460,787

shows an increase in consumption expenditures of 79 percent while the more optimistic assumptions yield growth of 90 percent, or over $76 million more, and 101 percent or $157 million greater consumption.

Table 3.2 makes it clear that as income and consumption expenditures rise, sales of food away from home also rise rapidly. In the SW, Food Away is projected to rise 62.5 percent. A more optimistic income assumption by 10 percent leads to a projected rise in Food Away of 74.4 percent while a 20 percent income assumption leads to a projected

Table 3.2

Projected Sales of Food Consumed Away From Home
High Income Scenarios

1972 - 1985
(Constant Dollars - 000 Omitted)

Year	Standard World	High Income (10%)	High Income (20%)
1972	40,385,920	$40,385,920	$40,385,920
1973	42,023,450	42,321,810	42,620,190
1974	43,658,750	44,246,610	44,837,220
1975	45,314,430	46,191,760	47,077,420
1976	47,007,970	48,181,640	49,372,060
1977	48,752,770	50,235,020	51,745,760
1978	50,560,060	52,367,620	54,218,830
1979	52,438,470	54,591,570	56,807,450
1980	54,395,630	56,917,930	59,526,450
1981	56,439,560	59,357,780	62,390,130
1982	58,577,470	61,920,970	65,411,710
1983	60,817,620	64,618,630	68,605,680
1984	63,167,630	67,460,980	71,985,650
1985	65,635,540	70,459,060	75,566,210

increase in Food Away of 87.1 percent. Table 3.3 shows the projected effect on eating and drinking places food sales while 3.4 shows the same information for sales of alcoholic beverages.

Table 3.5 translates increased sales into anticipated demand for food service workers. The 62.4 percent increase experienced in the SW projection--a growth in total food service workers on the order of 2.5 million workers--is increased in the face of high income assumptions to a 74.4 percent or 87.0 percent increase amounting to increases of 3.0 million and 3.5 million workers.

Table 3.3

Projected Sales in Eating and Drinking Places
High Income Scenarios

1972 - 1985
(Constant Dollars - 000 Omitted)

Year	Standard World	High Income (10%)	High Income (20%)
1972	26,440,660	$26,440,660	$26,440,660
1973	27,512,750	27,708,090	27,903,430
1974	28,583,380	28,968,250	29,354,930
1975	29,667,360	30,241,750	30,821,580
1976	30,776,120	31,544,520	32,323,890
1977	31,918,440	32,888,860	33,877,950
1978	33,101,670	34,285,080	35,497,070
1979	34,331,470	35,741,100	37,191,830
1980	35,612,820	37,264,170	38,971,960
1981	36,950,980	38,861,540	40,846,820
1982	38,350,670	40,539,660	42,825,040
1983	39,817,290	42,305,810	44,916,140
1984	41,355,850	44,166,700	47,129,030
1985	42,971,590	46,129,550	49,473,220

Table 3.4

Projected Alcoholic Beverage Sales in Eating and Drinking Places
High Income Scenarios

1972 - 1985
(Constant Dollars - 000 Omitted)

Year	Standard World	High Income (10%)	High Income (20%)
1972	8,533,757	$ 8,533,757	$ 8,533,757
1973	8,879,779	8,942,821	9,005,871
1974	9,225,326	9,349,541	9,474,342
1975	9,575,178	9,760,563	9,947,709
1976	9,933,033	10,181,030	10,432,570
1977	10,301.710	10,614,920	10,934,150
1978	10,683,600	11,065,550	11,456,720
1979	11,080,520	11,535,480	12,003,710
1980	11,494,080	12,027,060	12,578,250
1981	11,925,970	12,542,610	13,183,360
1982	12,377,730	13,084,220	13,821,840
1983	12,851,080	13,654,250	14,496,740
1984	13,347,650	14,254,860	15,210,950
1985	13,869,130	14,888,370	15,967,540

Table 3.5

Projected Demand for Food Service Workers
High Income Scenarios

1972 - 1985

Year	Standard World	High Income (10%)	High Income (20%)
1972	4,014,489	4,014,489	4,014,489
1973	4,171,712	4,201,331	4,230,951
1974	4,335,594	4,393,972	4,452,623
1975	4,502,498	4,589,671	4,677,671
1976	4,674,764	4,791,481	4,909,864
1977	4,852,332	4,999,859	5,150,222
1978	5,035,932	5,215,971	5,400,356
1979	5,225,903	5,440,476	5,661,306
1980	5,422,678	5,674,125	5,934,167
1981	5,626,598	5,917,522	6,219,825
1982	5,838.011	6,171,235	6,519,133
1983	6,057,251	6,435,821	6,832,919
1984	6,284,649	6,711,801	7,161,971
1985	6,520,634	6,999,725	7,507,095

High Cost Scenario

In the context of generally optimistic assumptions regarding the economy, it is useful to explore the possibility of an increase in food service costs that is substantially more rapid than other costs in the economy.

Such a cost push experience might occur for either of two reasons--or for both of them: changes in the cost of food or the cost of labor.

Cost of Food. The pressure of world population on world food supply, some writers feel, will lead not only to shortages in poorer countries, but to higher prices in developed countries. One writer speculates that

> ". . . we are entering an extended period in which global grain reserves, which provide a crucial measure of safety when crop failures occur, are likely to remain on the low side, and in which little, if any, excess cropland will be held idle in the United States. Food prices are likely to remain considerably higher than they were during the last decade. Meanwhile, the world has become overwhelmingly dependent on one continent--North America--for exportable food supplies. From a global perspective, then, the world is likely to be highly vulnerable on the food front in the years ahead. (1)

Labor Costs. Labor costs in the food service industry have increased at about the same pace as labor costs in the economy in general. The possibility, however, that social policy will impinge on this pattern and drastically increase costs becomes increasingly likely. A very large proportion of the workers in the hospitality industries are unskilled and hence are in the lower income groups most dramatically impacted by social policy (2).

An alternative to income for unskilled work that is becoming increasingly attractive is that of income for non-work--that is, relief. Average income for either AFDC or unemployment approaches and sometimes surpasses that which the average worker in the food service industry makes. This competition with non-work may be the force that dramatically drives up real wages in the food service industry. Operators may simply find they have to pay substantially more than a worker can earn for non-work in order to get people to come to work (3). Should an "explosion" in wages for unskilled workers be combined with elimination of the tip credit for tipped employees--a stated goal of organized labor--the result could be a very dramatic relative increase in costs and hence prices in the food service industry.* Under this assumption, the most extreme effect would clearly be in full service operations.

The Futures Model projects a striking impact from relative price increase for food away from home on both food sales and demand for food service workers. This projection suggests that dramatic increases in the relative cost of food away from home will result in serious reductions in food service employment which, however, would still grow much more rapidly than the work force.

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*At the present time, employers may credit up to 50% of an employee's tips towards fulfilling the minimum wage. There are presently two bills pending before the congress to eliminate the tip credit nationally. This would have the effect of doubling the cost of wages for tipped employees such as waiters and waitresses. Some states already have more stringent provisions regarding tip credit, including New York and California, but not Pennsylvania.

Relative Price of Food Away From Home. Prices of food consumed away from home have increased more rapidly than all prices in every year from 1960 to 1975. The mean difference in the period was 1.3 points and the SW projection adopts this price increase differential. (It is important to emphasize that the discussion that follows focuses on the difference between prices of food away from home and the price level in general, not just on changes in the price of food away from home.)

In only one year, 1974, did food away from home prices increase over two and one-half points more rapidly than all prices; and during 1974 they increased 3.4 points more rapidly. The differential fell back to 1.7 points for the first four months of 1975. Price changes in prices for All Commodities, Food Consumed Away From Home, and the differential between them is summarized in Table 3.6.

In the high cost scenarios summarized in Table 3.7, a price rise differential for Food Away prices compared with all prices in the economy of 2.5 percent was assumed for purposes of analysis. While the Standard World shows food sales increasing 62.5 percent, this assumption of a substantially higher relative price rise for food service than has been the case--double the differential used in SW--results in a substantial decrease in the growth in total food sales. Total Food Away in SW increased 62.5 percent but in

Table 3.6

Changes in Price Levels of Previous Year
All Commodities and Food Consumed Away From Home

Year	Price Changes In All Commodities	Food Away From Home*	Differential
1959	+ .8	+ 2.8	+ 2.0
1960	1.6	2.6	1.0
1961	1.0	2.1	1.1
1962	1.1	2.7	1.6
1963	1.2	2.2	1.0
1964	1.3	1.6	.3
1965	1.7	2.5	.8
1966	2.8	4.6	1.8
1967	2.8	5.2	2.4
1968	4.2	5.2	1.0
1969	5.4	6.1	.7
1970	5.9	7.4	1.5
1971	4.3	5.1	.8
1972	3.3	4.0	.7
1973	6.2	7.8	1.6
1974	14.7	18.0	3.4
1975 (April)	10.9	12.6	1.7

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*1959-63, base is 1957-59
1963-1975, base is 1967

Table 3.7

Projected Sales of Food Consumed Away From Home Assuming Food Service Cost/Price Differentials High Cost Scenarios

1972 - 1985
(Constant Dollars-000 Omitted)

	Standard World	Cost Differential	
Year	1.3% Differential	2.5%	5.0%
1972	$40,385,920	$40,385,920	$40,385,920
1973	42,023,450	41,312,480	39,831,280
1974	43,658,750	42,287,030	39,373,880
1975	45,314,430	43,309,920	38,968,260
1976	47,007,970	44,382,120	38,579,790
1977	48,752,770	45,504,640	38,181,000
1978	50,560,060	46,679,270	37,750,320
1979	52,438,470	47,907,210	37,268,760
1980	54,395,630	49,190,220	36,720,140
1981	56,439,560	50,531,670	36,091,600
1982	58,577,470	51,934,780	35,370,950
1983	60,817,620	53,404,770	34,549,090
1984	63,167,630	54,946,540	33,616,780
1985	65,635,540	56,565,970	32,566,190

this high cost scenario, food sales increase only 40 percent. A note of caution is in order here: While the Futures and BLS Models are based on consumption functions for food services and many other product and service groups, the models were not based on extensive research into the price elasticity of food service and, particularly, may not accurately reflect reality under such heroic sustained price differential assumptions as are employed in this scenario.

Table 3.8 suggests the results of such price elasticity in terms of work force demand under unfavorable food service price assumptions. The Standard World, with a 1.3 percent price increase differential, showed a growth of 62.4 percent in work force demand. The 2.5 percent price differential, showed a growth of 62.4 percent in work force demand. The 2.5 percent price differential assumption, applied over each of the 14 years projected, yields a 40 percent growth in work force demand.

This projection need not be taken literally to have substantial meaning. While relatively large across the board increases in cost would undoubtedly cause substantial disruption in the market place, particularly for owners and operators, this field of work clearly represents one which offers a relatively high degree of security to employees. In the face of consumer price increases (which have, for instance, recently led to severe cut-backs in manufacturing employment) it appears food service workers could expect employment to hold up quite well, growing under unfavorable relative price developments, at a rate nearly twice that of the work force as a whole.

Table 3.8

Projected Demand for Food Service Workers Assuming Food Service Cost/Price Differentials High Cost Scenarios

1972 - 1985

Year	Standard World 1.3% Differential	Cost Differential 2.5%	5.0%
1972	$4,014,489	$4,014,489	$4,014,489
1973	4,171,712	4,101,134	3,954,093
1974	4,335,594	4,199,373	3,910,079
1975	4,502,498	4,303,327	3,871,935
1976	4,674,764	4,413,633	3,836,613
1977	4,852,332	4,529,047	3,800,130
1978	5,035,932	4,649,394	3,760,044
1979	5,225,903	4,774,328	3,714,123
1980	5,422,678	4,903,752	3,660,616
1981	5,626,598	5,037,625	3,598,060
1982	5,838,011	5,175,980	3,525,178
1983	6,057,251	5,318,954	3,440,985
1984	6,284,649	5,466,719	3,344,587
1985	6,520,634	5,619,521	3,235,273

High Technology Scenario

For purposes of examining, in a very simple way, the potential effect on labor demand of drastic improvements in productivity, Table 3.9 compares the SW demand for food service workers with the demand that might be projected if labor productivity, as a result of technological breakthroughs, were to increase 2.5 percent, 5 percent, and 10 percent more rapidly than the BLS Model which reflects no change in productivity. (The average American rate of productivity change for the Total Private Economy is projected for the New World at 3.2 percent from 1972-1980 and 2.8

Table 3.9

Demand for Food Service Workers Under Assumptions of High Productivity

1972 - 1985

		Total Workers Productivity Change		
Year	Standard World	2.5%	5%	10%
1972	4,014,489	4,014,489	4,014,489	4,014,489
1973	4,171,712	4,067,419	3,963,126	3,754,540
1974	4,335,594	4,227,204	4,118,814	3,902,034
1975	4,502,498	4,389,935	4,277,373	4,052,248
1976	4,674,764	4,557,895	4,441,025	4,207,287
1977	4,852,332	4,731,023	4,609,715	4,367,098
1978	5,035,932	4,910,033	4,784,135	4,532,338
1979	5,225,903	5,095,255	4,964,607	4,703,312
1980	5,422,678	5,287,111	5,151,544	4,880,410
1981	5,626,598	5,485,933	5,345,268	5,063,938
1982	5,838,011	5,692,060	5,546,110	5,254,209
1983	6,057,251	5,905,819	5,754,388	5,451,525
1984	6,284,649	6,127,532	5,970,416	5,656,183
1985	6,520,634	6,357,520	6,194,507	5,868,480

percent from 1980-1985. For the Retail Trade Sector the 1972-1980 rate is 3 percent and the 1980-1985 rate is 2.6 percent.[*]) As that table is constructed to demonstrate, the demand for food service workers would grow more slowly than the 62.5 percent increase indicated in the SW. Assuming a 2.5 percent increase over SW in productivity, the food service work force would grow 58.4 percent. A 5 percent increase would reduce work force growth to 54.3 percent. The third scenario represents a nearly impossible, sustained improvement in productivity of 10 percent per year--and still yields a 46.2 percent increase in food service workers, or well over twice the projected growth in the work force.

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[*] BLS Bulletin, No. 1809, p. 37.

In some respects, this scenario ought to be called a "System Change Scenario" as the increase in productivity could result from such a basic system change as further drastic reduction in services resulting from continued rapid growth of fast food outlets. This scenario, then, illustrates the manpower effect of any substantial change in productivity and demonstrates that, if demand increases as forecasted, even major improvements in productivity will not eliminate the need for very substantial increases in food service employment.

Implications for Curriculum Planning

The notion of the food service industry as a relatively stable employer is supported by these scenarios. Clearly, if incomes increase more rapidly than anticipated, the demand for food service workers would explode at nearly four times the growth rate projected for the work force as a whole. While sustained unfavorable price increase differentials would retard the growth of the industry somewhat, in a generally favorable economic climate, food service employment would grow at nearly twice the level of the work force as a whole. This suggests that real wage increases, while slowing the industry's growth somewhat and undoubtedly leading to difficulty for owners of restaurants, would not endanger the relatively optimistic employment outlook. Similarly, if rising labor costs led to greater investment to increase worker productivity, this development would limit increasing employment demand somewhat, but the industry's growth would still require a substantially greater increase in workers.

References

1. Lester R. Brown, "Global Food Insecurity," The Futurist (April, 1974), p. 56.
2. John P. Henderson, "Labor Market Institutions in the Lodging Industry," Michigan State University Business Studies (MSU Graduate School of Business Administration, 1965), p. 55.
3. For a more detailed statement of the argument, see Thomas F. Powers, "Labor Supply, Payroll Cost, and Change," Cornell Hotel and Restaurant Administration Quarterly (May, 1974), pp. 5-13.

IV

THE RESTAURANT INDUSTRY OF THE FUTURE

IV

THE RESTAURANT INDUSTRY OF THE FUTURE

A Visit to Tomorrow

"What we need is a night on the town--some good food and relaxation. We haven't been out in weeks!" John had had a tough week--and Mary was ready to go, too.

When they arrived at "The Voyageur", John made the financial arrangements at the lobby desk. The evening wasn't cheap: $150 for the two of them. But, then, it wasn't an every day occurrence. It was all charged to John's Master Charge, and the payment schedule hadn't looked too bad.

They were shown into the Departure Lounge. John and Mary were both somewhat uncomfortable. They had only been here once before--that visit they spent hunting a Bengal Tiger two years ago. The noise and humdrum of Cincinnati was only a few minutes behind them, but here they were in the most luxurious room they had ever set foot in (except on that one previous visit). The Voyageur was, quite unlike their accustomed surroundings, modernistic, plush, and softly lighted. John could still feel the imprint of his Master Charge in his hand--and he began to turn that repayment schedule over in his mind a bit. Mary was considering Vikki, the hostess who was escorting them to their place in the lounge: "Slinky looking," she thought. She had just begun to wonder what John was thinking about when Vikki stopped and said to John, "How's this?" John nodded and they all sat down.

It quickly became clear that Vikki, while she was a very attractive young woman, was no competition for Mary. Quite the reverse. After she'd suggested drinks, the conversation quickly became lively as Vikki drew Mary out regarding their plans for the evening. After a few minutes she turned to John and began to review the very simple cabin operating procedures they would be using. As she did so, a disinterested observer might have noticed a paradox in the conversation: The controls were simple and yet John's mastery over them seemed to be as much the subject as the simple operating procedure. In fact, Mary was really impressed when she realized that John was explaining the capsule's operation to Vikki! Vikki was clearly impressed with John's ability to handle things, and Mary thought she detected the least bit of envy on Vikki's part.

The drinks Vikki had keyed into the terminal of their booth appeared almost at once in the cubicle above the terminal. (John thought with relief, "Well, at least they're paid for!") They proved to be mild, smooth rum drinks. Vikki suggested they order another and then offered them an Acapulco Gold, which they accepted. John then dictated the order of the evening. They would finish their drinks in a balloon ride over New England at 1000 feet. Then they would have dinner on a polar flight. Vikki made some suggestions about the menu choice--and John was man of the world enough to accept "the advice of an expert"--which seemed to please Vikki. After dinner, they would relax for a couple of hours of leisurely underwater exploration of Australia's Great Barrier Reef.

As Vikki, eye to the console, announced that their cabin was ready and then rose to show them to it, John and Mary almost forgot that the whole "voyage" would take place in a large cinderblock structure which would remain resolutely on the outskirts of Cincinnati for the five or so hours of their trip.

Vikki sat in the cabin with them for a few minutes as John reviewed for her the operation of the control board. The board was small, but it had the complex appearance of a small computer console. Although the small piece of equipment was complex in appearance, it was really very simple to operate: choices of drinks, menu, desserts, etc. displayed on call on a small TV screen; call for drinks by number; change dinner order by voice order if desired; turn and repeat last sweep of trip with "Repeat Command" button, (Sorry, no more than three of these five minute segments without an extra charge); for distress call use red button.

Vikki left an unopened pack of Acapulco Golds with them as she stepped out of the cabin, sealing the door. The "cabin" was really a small globe. Inside it were two large, plush seats with a variable setting for the backs to make them into easy chairs or reclining lounges. The control console was on a low movable box that, at the moment, lay between the lounges. In front of them was a low table which John had demonstrated he could raise if they wanted to "sit at the table" formally when dinner came.

Unbidden, the sides of the sphere changed gradually from a featureless play of lights to a view of a woods in spring. The smell of blooming flowers was subtly present, and--suddenly--the sounds of the woods. A soft tone sounded and John spoke to the console. "Ready?" and heard Vikki reply, "set to go." "Start Phase 1," he said. The balloon lifted them up above the forest and they began to move swiftly over the mountains. They could just about make out the coast line. Mary was reminiscing about their last visit to Disneyworld as they floated up a beautiful river valley. John's mind drifted to their vacation--only six months off--and decided firmly that he would stay at MGM's New Grand in Vegas even if it did cost quite a bit. If they could run "The Voyageur" this well, that new hotel must really be something.

An hour later, they found themselves soaring over the North Atlantic. Below them they could see enormous icebergs glistening in the sun. The console light changed from green to blue, as a tone sounded indicating that the pre-programed dinner hour had come. John responded with the "ready" button on the keyboard, indicating 10 minutes from now would be fine.

Meanwhile, in the "back of the house," their order was retrieved from memory by computer. In the automated freezer, the pouches of "Poulet Normande" dropped onto a moving belt and were transported to the Recon Unit where they came to rest. The Bouchet a la Reine arrived at the same time but was quickly placed in the radar range by a young technician in a white lab coat. The first course was then assembled--with the Bouchet, a unit from the relish box, rolls and butter. The tray cover was lowered, and John and Mary's cabin number was keyed into the controls. In less time than it would také any waiter, the capsule arrived at the cabin. A tone sounded and the numeral "1" lighted on the panel. John pressed a button and the capsules--thier tops removed--slid out onto the low table. A few minutes later the main course's arrival was indicated by the numeral "2" on the screen. When John pressed the ready button the table moved the panel, tilted slightly, and the dirty dishes slid away to be replaced by the main course. The wine they'd chosen was presented at just the right temperature.

Their speed seemed to accelerate as they finished dinner and they soared over the Pacific swiftly. Small bottles of the dessert wine presented themselves as the cabin suddenly became a bubble that entered the fantastic underwater world of the coral reef. The light dimmed appreciably and John called up a music sound track that suited their mood. They laughed as an elegant, armored lion fish darted away from them, and they settled back to relax and enjoy the second half of their evening.

* * * * * * * * * * *

But, for you and I, gentle reader, the lights must go up. Is this the restaurant of 1984 or 1990? Clearly all the technology is currently available and so are most of the social institutions. There are some very unlikely elements in the picture we've been viewing--and some elements that _could_ be provided by 1990, but probably won't be. But this scenario provides a useful way of stepping out of the humdrum and stimulating the imagination. Regretably, we must return, if not to the humdrum, at least to the analytical.

"Tomorrow" Reconsidered

Income. Many of the elements in this scenario are available now or very likely to be by 1985. Income has grown between 2 and 4 percent in the past 20 years as noted earlier in Chapter 2. If income continues to grow at an average of 3 percent, the proportion of Americans earning over $15,000 a year will rise from 25 percent (in 1971) to 41 percent in 1985. The proportion of Americans earning over $25,000 will more than double from 5.3% in 1971 to 11.9% in 1985. The average income, in fact, would be $14,928 (see Table 2.2, p.). Certainly the price for an evening at "The Voyageur" is high--and yet with the kind of family income suggested by the previous analysis (and with the projected smaller families of the future making less demands on parents' income) an evening's entertainment of this sort may well be considered "worth the price." Certainly, the availability of a charge card and time-payment plans for nearly any service is already a fact of life.

Package Pricing. The package pricing we noted was in practice at "The Voyageur"--that is one charge covering all the expense--is already becoming more and more common in package tours and "packaged evenings." An increasing number of restaurants offer dinner including a steak, and all the bread and salad you want to eat as well as all the beer or wine you want to drink. This "package" is provided for some set fee.

Hospitality Establishments and "Show Biz." That "an experience" is already an important part of the expensive restaurant scene is suggested by this recent article from Newsweek.

> For most people, dining out used to mean going to restaurants that had tables dressed in white, waiters dressed in black, and perhaps the lights turned low. The monotonous decor hardly mattered because the food was the thing. No longer. Now thousands of diners are flocking to places that emerse them in such non-gastronomic ambiences as flying, railroading, or even high finance. "Theme" restaurants are turning up in bank vaults, barns, churches, warehouses, river barges, railroad cars, and train depots. What's more, they are jammed with customers while many conventional eating places are suffering through the recession. "People are looking for more than a meal," says Mike McClellan, an executive of Long Beach, California's Specialty Restaurant Corp., a builder of theme restaurants. "They want a total experience." (1)

As the scenario of "The Voyageur" suggested, there are already significant entrants from the world of entertainment in the hospitality industry. The Disney Organization's involvement in hospitality complexes is too well known to need further discussion. John's reference to the MGM's "New Grand" suggests the possibility of another Grand being built in Las Vegas by the period 1985-1990, simply because of an apparently ever higher rate of obsolescence among hospitality facilities. (10) The present MGM Grand, however, presents itself as follows in its brochure:

> The folks who conquered the Roman Empire--(a scene from "Ben Hur") smashed the Third Reich--(a World War II battle scene) and charted the universe--(a picture of the space station from "2001"), now bring you Las Vegas starring the MGM Grand Hotel. (MGM, 7)

The mix of services available in that hotel clearly indicates the significance of the coming of "show biz" to the hospitality industry. Increasingly, guests are looking for "an experience" rather than just dinner. The technology for the "movies" at "The Voyageur" obviously exists today. These movies could permit the realistic recreation of visual images of whatever set of experiences, though some advance work in applied optics might be necessary to achieve precisely the effect described in our story.

Of course, the question of whether guests will seek the kind of privacy offered by "The Voyageur" is open to question. Quite probably, for every place offering privacy there will be several others offering a convivial atmosphere. The significant point, however, is that in a dining experience, some atmosphere has already come to be an acceptable substitute for extremely high quality in the food.

The Welcoming Function. Some elements of the scene at "The Voyageur" are quite new. One that seems quite likely to emerge in restaurants as it is already doing in resorts (11) is that of a hostess or host trained in interpersonal skills who act to make the guest--perhaps an infrequent visitor to the expensive restaurant--more comfortable and at home in unusual surroundings. The function of the "gatekeeper" of the classical restaurant--that is, the Maitre d'--has been to recognize regular guests on their arrival and to welcome new guests in a suitably formal manner (as well as to keep out undesirables). It may be that this gatekeeping function will evolve as the variety of restaurants increases and the number of frequent visitors is reduced--at the same time that the number of infrequent visitors who might be uncomfortable increases. In any case, the interpersonal skills displayed by Vikki, while they might not be precisely the application of skills needed for most food service settings, nevertheless constitute a potentially important part of the knowledge base of service workers.

Intoxicants, New and Old. Implicit in the scenario above, too, is the possibility of the legalization of marijuana ("Acapulco Gold"). It's difficult to be absolutely certain that this will happen, but there is an increasing acceptance of marijuana as little different from alcohol. The impact of legalization, should it ever come, on food service establishments could be very extensive. Marijuana is (6) widely reported to limit the amount of alcohol consumed by persons who use it (6). This could be a highly significant development in terms of the sales mix of some food service establishments. Something on the order of 28 percent of the sales volume of restaurants that serve liquor is accounted for by liquor sales (2, 3). Since liquor sales are radically more profitable, in many operations, than food sales, a substantial drop in beverage sales would have a serious impact on profitability unless offsetting measures were taken. Legalization (or decriminalization) of marijuana would probably, therefore, have the effect of further reinforcing the trend toward "package pricing" noted elsewhere.

Marijuana also reportedly makes users significantly more passive as opposed to liquor which is basically convivial in its effect (8). Thus the trend toward coupling some kind of entertainment with higher priced food service establishments is reinforced.

Mechanical Delivery Systems. Some of the mechanical delivery systems found in "The Voyageur" story appear, at the present time, to be highly unlikely. But the technology already exists to accomplish this mechanical kind of delivery and is in use not only in baggage handling in large airports, but also in book delivery systems in large libraries. The central issue with the physical delivery systems, however, is that of balancing cost against cost. It is entirely possible that more man hours could be expended in building, installing and making a mechanical delivery system work than would be required in the aggregate for servers to carry the product a short distance over the life of the property. For the indefinite future it will probably be less expensive to have people carry food to guests than it will be to have the food "pop up" at the guests' fingertips. It seems quite possible, too, that the personal delivery is more pleasing--provided it is done correctly.

On the other hand, the development of conveyor systems working in conjunction with a kitchen based "order assembler" could permit a reduction in the amount of time servers spend running back and forth from their station to the kitchen--doing nothing more than carrying. Freshwater's studies (5) indicate that the cost of walking done by servers constitutes between 16 and 18 percent of the annual payroll in table service restaurants with servers spending 25 percent of their time walking an average of 6.5 miles a day.

Computerized Kitchens. A computerized kitchen run by a man in a white lab coat also seems unlikely, although if somebody wanted to wear a lab coat there would probably be nothing to prevent him from doing so. In fact, it is easier to remove individually frozen products from a bulk freezer and place them in a holding freezer adjacent to the reconstitution unit than it is to cook. During the meal, the employee simply reaches into the holding freezer to bring the product out. This is undoubtedly more economical than it is to establish computers and moving belts and other gimcracks.

Frozen Prepared Food. On the other hand, frozen prepared food is already a fact of life in the food service industry and the work presented in Volume III of this study supports the notion that very high quality tolerances can be attained with frozen prepared foods. This does suggest the reasonable possibility of a high priced, service-intensive restaurant using frozen prepared products. The greater flexibility offered by commissaries (rather than large manufacturing plants) in terms of variety and quality also reinforces this notion.

"The Voyageur" serves, in a way, to jolt us into thinking more freely about what we might or might not see at some point in the future, but perhaps the time has now come to give the matter more systematic consideration.

A More Systematic View

The restaurant industry of today is very much like the restaurant industry of 15 years ago. All the elements now present were present then; only the proportion has changed. In the next 10 to 15 years a similar kind of evolution is likely to take place. It's appropriate, here, to ask, "what will the restaurant industry be like tomorrow?" And the answer is "like it is today--only more so."

Figure 4.1 presents an abstract frame of reference for thinking about the major elements of the restaurant industry. Some of the terms used are somewhat arbitrarily defined and undoubtedly many important elements have been left out because we've deliberately oversimplified to get a usable abstract structure for purposes of analysis. This scheme, however, is useful for thinking about what the restaurant industry is today--and what it is likely to be tomorrow. (This chart refers to restaurants and makes no attempt to address many other elements of the food service industry such as in-plant feeding, college feeding, or government food service. These will be considered later.)

In Figure 4.1, the vertical axis rates restaurants on a scale from low to high in terms of complexity of delivery. A very complex delivery system is the haute cuisine restaurant. A restaurant having a high-complexity delivery is characterized by very high quality, a typically great variety, high prices, and an association with "high status." On the other hand, a fast food restaurant (while the "quality" of the product may be excellent as far as it goes) offers relatively simple, inexpensive fare. It is no reflection on McDonald's to say that a hamburger can be only so good. Prices in such an establishment tend to be lower and (in the sense that one would not take the boss out to dinner there) its status association is relatively low.

On the horizontal axis we move from a scale at the left of traditional establishments to a scale at the right of innovative establishments. There are three general kinds of vertical groupings in the figure suggesting that there are three different "time dimensioned" kinds of establishments represented at most price levels. First of all, there is the traditional establishment, the kind of establishment that was either imported from Europe or has been in this country for many, many years. In the middle of the chart is a grouping of restaurants representing typically American systems that grew up in the thirties and forties, and generally hit their peaks in the fifties. These tend to be relatively more service intensive and partake of a relatively higher complexity of delivery. Finally, at the right is a group of restaurants that have come on the scene, for the most part, since the early sixties, though prototypes, in limited numbers, were undoubtedly around earlier. It will be noted that dotted lines are associated with many of the different types of restaurants. These dotted lines suggest a range of values with respect to complexity of delivery or with respect to traditionalism versus innovativeness examining each of these general types of restaurants.

Traditional Food Service Systems. The first group is the traditional style, and we begin with the hamburger stand. Actually, these were at first literally "stands," but an early delivery mechanism of this kind was the Royal Castle chain. (Significantly, the Royal Castle chain is reportedly (4) going out of business.) The Royal Castle offered counter service and in some places table service, and it used a short order cook. In terms of the products available for sale, the hamburger stand has a great deal in common with many fast food restaurants of today except that today's restaurants rely more on a systematized production system, less skill, more self-service, and a more highly limited menu.

The "neighborhood establishment" ranges from the neighborhood bar to the Mom and Pop restaurant. Once again, there is a fairly wide variety of menu items, and table service by relatively unskilled and unsophisticated servers is available. This restaurant generally serves the local clientele and features relatively low prices. Finally, in the low complexity of delivery area, we find the soda fountain, which had a good bit in common with the hamburger stand and the Mom and Pop restaurant--a fairly extensive menu of snacks and sandwiches type and featuring such dessert items as sodas, milkshakes, and sundaes. It is inappropriate to say that these food service systems have vanished. Indeed, there are still many of them around, and there undoubtedly will be in the future. But their incidence is declining. They are based on skilled and semi-skilled workers--short order cooks, Mom and Pop, and the untrained waitress.

Moving to the next category in the traditional grouping, we come to the hotel dining room. This establishment features a fairly full service menu and is relatively service intensive. One cannot say that the hotel dining room is disappearing, but it is interesting to notice that the number of hotel room nights sold has not changed since 1948, suggesting a relatively stagnant market (10). Most hotels do not earn a profit on their restaurant operation; they are simply for the convenience of the guest.

The next traditional establishment is the night club. It tends to be more expensive than the hotel dining room, but because it can also shade off into a "road house," it represents a fairly wide range of complexity of delivery.

Finally, we come to the haute cuisine restaurant. This is the classic restaurant featuring European cuisine and a very formal service format. The traditional fine dining establishment relies on highly skilled cooks, highly skilled servers and, in many ways, highly skilled diners--that is, people who "can tell the difference." Since the fine restaurant is highly labor intensive and has experienced nothing more than minor improvements in productivity, the cost of dining in such establishments has been increasing rapidly. In general, a "critical mass" is required for such an establishment in three different kinds of ways.

First of all, it requires a large enough population concentration to secure an adequate number of guests who can afford the relatively expensive meal. Secondly, a critical mass of skilled personnel must be brought together and, once again, this normally, though not invariably, means a fairly large metropolitan area. The third critical mass is really a spirit rather than a mass: There is a need for an interest on the part of owners such that they are willing to work extremely hard, putting in long hours in a very demanding field for very little if any more money than they could make working for somebody else--and with fewer problems. There will always be this kind of restaurant, it seems likely, because there will always be the kind of person who feels it is important and pleasurable to run this kind of establishment. It is true, however, that such an establishment will generally be small. Moreover, it is likely to be clustered in large cities and built around one or two individuals.

American Restaurant Systems of the 30's, 40's, and 50's.

In the center of the figure lying somewhere between the traditional and the innovative are a group of restaurant types that have grown up in the United States during the 30's, 40's and 50's. The Drive-In is the real precurser to the fast food establishment, but it is substantially more labor intensive and offers a considerably greater menu variety. The full-service restaurant is one which was not traditionally intended to be extremely luxurious, though it is usually well appointed. It is characterized by a relatively full menu and table service. At the lower end of the complexity of delivery might lie restaurants like Howard Johnson's; in the middle, Marriott Hot Shops; and at the upper end, Stouffer's Downtown Restaurants. A similar system is the cafeteria which however, limits service and tends to be lower in price. It's interesting to notice that Mariott has announced its gradual movement out of the Hot Shop field and Stouffer's, too, has been moving away from the traditional full-service restaurant format that was characteristic of their downtown establishments fifteen years ago. Cafeterias, except in some parts of the South have been declining in popularity for several years.

None of these restaurant systems has "disappeared" and none are likely to, but their labor intensity, as wages have increased, has subjected them to cost pressures which have had to be passed on to the customer. With rising prices, guest counts have begun to fall, making these marginal establishments which are, moreover, difficult to staff. The full-service restaurant at the lower end of the scale has, for a number of years, moved in the direction of frozen prepared foods--as indeed, Howard Johnson's has done for many years. This tendency creates some variability in terms of innovativeness scale.

The shopping mall restaurant is very similar to the full-service restaurant in many respects, but it tends to go further toward the low end of the complexity of delivery scale. It also occupies a broader range on the traditional-innovative scale because of the architecturally ingenious restaurants (offering an "experience" in the visual sense) found in some of the newer shopping centers.

The steak house is a traditional American establishment offering a fairly wide variety of appetizers, a full line of steaks and, commonly, a substantial selection of seafoods and a fairly substantial variety of desserts.

This establishment features a relatively complex menu, requires some skill in its kitchen, and has placed a great deal of emphasis on table service. It is beginning, however, to feel competition from simpler "steak house" versions which we will examine in just a moment.

Innovations in Food Service Systems. The term "family restaurant" is used here to designate restaurants whose menus, while simple, offer a range of products for all ages. Typical of this kind of establishment is the Big Boy chain. This restaurant differs from the shopping mall restaurant and the full-service restaurant by having a substantially less complex menu and very simple service, or some self-service. A similar type of restaurant is found in the low-priced steak restaurant which normally features an inexpensive steak the customer picks up and carries to the table himself in something very much like the cafeteria style. In such an establishment there is little or no service beyond the counter and the busing of dirty dishes.

Fast food establishments are highly systematized with a rigidly limited menu and complete self-service from the counter. Work roles in the preparation system in these restaurants have been so highly fragmented and simplified that they can be, and are, taught in a very short period to young, unskilled workers. These establishments offer substantial price advantages over more service intensive competitors.

An even simpler kind of establishment is the vending restaurant. Food service vending has been around for a long time, but increasingly, the vending restaurant is offering a much wider range of services including (almost) freshly prepared foods. Full dinners, like fried chicken and mashed potatoes or salisbury steak and french fries, are available and can be of excellent quality. While rated low on complexity of service, it's important to notice that these establishments replace much more complex kinds of systems. Thus, for instance, in the new state office building in Columbus, Ohio (a forty-story structure housing 2500 employees) there are three full-service vending restaurants offering breakfast (including pancakes, scrambled eggs, waffles, french toast, bacon, and sausage) and dinner. On a smaller scale, an office building may close a "Mom and Pop" operation and replace it with a vending restaurant.

The "beef and beer" restaurant threatens to compete with the relatively more formal steak house and full-service restaurant. This restaurant features the package pricing discussed earlier and a highly distinctive decor. But the restaurant, from a systemic standpoint, is more similar to a fast food restaurant than it is to its full-service or steak house competitors. It features a tiny kitchen in which only two or three cooking operations are performed, and these are highly repetitive and routinized. Because the menu is so simple and because there is a substantial amount of guest self-service, servers can accommodate a fairly large number of guests, and the sophistication of the service is reduced to a bare minimum.

Finally, we come to the theme restaurant which was described in an earlier section of this Chapter in the quote from Newsweek. To quote from that article again:

> Most theme restaurants succeed by lavishing attention on the decor. The food often sounds clever on the menu--but usually the fare is unimaginative and bland, although restaurant-goers don't seem to mind.---'The food is not the best in the world but there are so many rooms here I guess it stops you from getting bored' said a businessman after lunching at New York's Auto Pub, which is divided into sections like the Pit Stop, Lovers Lane, and the Drive-In Movie. (1)

These restaurants (on a much less substantial scale than "The Voyageur" offer not only something to eat but an experience--a night on the town and the entertainment of a distinctive atmosphere.

Summary Observations

The restaurants classified as relatively more traditional appear to be in the decline stage of the product life cycle. Thus, fast food units grew from just over 6 percent of the number of firms in the restaurant industry in 1960 to triple that proportionate size in 1971, increasing their numbers, as well, by 300 percent. In the same period, restaurants other than fast food declined by 7 percent (9). This data gives an empirical base to the observation that the move is toward the more simple establishment requiring less skill and offering the guest fewer choices. This is not to assert that there will be no haute cuisine restaurants, or for that matter no hamburger stands; rather it is to suggest that the major growth will be in those kinds of establishments listed in Figure 4.1 at the innovative rather than the traditional end of the scale.

These kinds of establishments tend to be institutions of a mass culture, and certainly much of the growth in the income groups over $15,000 will be expected to come largely from young couples whose parents were of less affluent circumstances. Thus, the sophisticated background necessary to appreciate more elaborate service becomes less common among guests. This, perhaps, is reinforced for the generation as a whole now growing up who are being socialized, in McDonald's, to a restaurant industry that features great informality and freedom of movement on the part of the guest--and features very limited service.

At the same time that an informal style becomes increasingly popular, the popularity of such television fare as The Galloping Gourmet and Julia Child suggests no grounds for assuming that American people have lost their taste for fine foods. There will be, as noted above, a number of fine dining restaurants, which will however, tend to be small establishments built around one or two key people and concentrated in or near relatively large urban centers.

On the other hand, one of the major competitive developments on the horizon is the arrival of an establishment that, like the steak and beer restaurants discussed above, is a fast food establishment from a systemic viewpoint but offers a wide menu made up of frozen prepared items. As will be suggested further in a later chapter, the suggestions heard with increasing commonness for "truth in dining" legislation may soon force restaurant operators to face up to the need to merchandise "somebody else's food"--perhaps inserting a quality manufacturer's label on the menu or advertising "made in our own commissary." Thus, we could see a significant portion of the restaurant industry developing as a service intensive retail outlet for manufactured food. Should this day arrive--and there are many signs that it has already begun to arrive--the trend toward "an experience" as a part of the dining ritual will be further reinforced with operators using that "experience" to differentiate their establishment from others serving similar food. Thus the restaurant would become ever more dependent on service ambience (or location) for success.

Consumer Issues. The work presented by Greecher in Volume III suggests the dilemma of the consumerist in dialog with the commercial restaurant. The Warf study (12), a nutritional evaluation of McDonald's food (commissioned by McDonald's and conducted by the Warf Institute) suggests that, with the exception of nutrients available from fresh fruits and vegetables, a meal at McDonald's can readily supply as much or more than a typical Type A school lunch; that is, one-third of the RDA's. The problem, as Greecher shows in Volume III, is in the consumer and the consumer's choices. Since a commercial restaurant cannot regiment the consumer, he is free to choose an "unhealthy" (really, "less-than-healthy") meal. Greecher's data also gives grounds for suspecting that this is not a terribly serious problem. In the fast food restaurants she studied, the guests queried dined there so infrequently that the problem of nutritional impact was relatively minor.

The possibility of a conjunction of interests between the fast food restaurants and nutritionists does suggest itself. Surely fast food restaurants should welcome any opportunity they might find to build check averages, and Greecher's study lays grounds for thinking that fast food establishments could encourage guests to move toward a healthier meal by buying milkshakes instead of soft drinks as well as the specialty sandwiches which include lettuce, tomato, or other vegetables. This would be a healthier meal--and a more expensive meal. In light of the fact that Ronald McDonald is reported to be second only to Santa Claus in recognition by children, the possibility of Ronald's "endorsing nutrition" is not to be put aside by anyone lightly.

The other major consumer issue on the horizon at the moment for the commercial restaurant is the "truth in dining" legislation being proferred by consumerists. This legislation would require that frozen prepared foods be identified. Should such legislation be passed, given the relatively common use of convenience foods, the "issue" might turn into one of the biggest nonissues in recent years. If restaurant operators, as suggested earlier, pick up the challenge of "selling" a dining experience and good food, which they didn't happen to prepare themselves, the consumer could come to accept frozen prepared foods--admittedly, after some fairly serious disruption in the market place in the short run--more rapidly than the trade presently expects.

Delivery Systems. Since Volume II of this report is devoted to a consideration of centralized food service systems it will suffice here to suggest the reasons for the development of such systems. The Standard World scenario projects an increase in food service workers of 62 percent by 1985--during which time the work force as a whole is expected to increase by about 22 percent. Only the most pessimistic scenario shows a demand for food service workers less than that projected for the work force as a whole.

Clearly, it is reasonable to expect a serious difficulty in finding skilled workers in the face of such a forced-draft growth in the demand for those workers.

Accordingly, mechanization and work simplification in commissary settings is likely to replace the traditional kitchen at a more rapid pace in the next ten to fifteen years than it has in the last ten. The effect of the shortage of skilled workers moves in the direction of centralization and is further reinforced by social policy that drives up the level of wages. Since a restaurant system's productivity change is generally achieved only with system change (9) the move to centralization of production will also be a move toward controlling costs. With the increasing capital intensity of the restaurant industry and the need for substantial numbers of retail units to support the productive capacity of the commissary, the trend toward regional and national chains may be expected to continue, though the independent will always play an important role in the industry for the foreseeable future.

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V

THE ACTIVE GOVERNMENT SCENARIO

V

THE ACTIVE GOVERNMENT SCENARIO

Introduction

The Standard World, the Optimistic, and the Pessimistic Scenarios rely on the Futures Model. The Active Government Scenario, however, is not integrated into that model for two reasons. First of all, the model is designed to reflect trends in the industry as a whole and does not lend itself to the level of detail necessary to consider a single segment of the industry. Secondly, the model relies, in a significant degree, on assumptions of historical continuity and the development of the government's role in food service programs appears, for the most part, to be discontinuous. While the school lunch program is established and likely to continue, existing trends--the school breakfast program, the preschool program, special summer food service programs, and congregate feeding for the elderly--are all very small programs that appear likely to grow very rapidly in the next 10 to 15 years. Our consideration of public food service programs will be limited to those just enumerated. These programs presently account for about 7 percent of food consumed away from home. By the period 1985-90, they are projected to grow to between 9-1/2 and 15 percent of food consumed away from home.

It should be noted that the projections made in the balance of this section explore the growth of small but well established programs for which a great deal of support is apparent in and out of government circles. In general, the low projections made would probably be regarded as unduly "pessimistic" from the point of view of the advocates of a program. The high projections represent a conscious attempt to explore high but feasible growth rates. The difficulties of prophecy have been explored elsewhere and this section makes no claim of making precise estimates of the future level of any program. The intention, rather, is to establish a reasonably probable range of activity. A key point is that the projections do not involve any new programs but rather the unfolding of existing programs that have already exhibited healthy growth trends. The underlying assumption throughout this section is that our society--and its government--will continue to support the kinds of programs currently gaining support and that the stated goals of the newer programs will be more completely fulfilled in the next 10 to 15 years.

This scenario is based on the interaction of three basic elements: government policy, income levels, and changes in the relative size of various aged population groups.

James Lyday (13) in a study conducted for the Office of Economic Opportunity in 1966 showed that the definition of "poor" has consistently included the 15 to 20 percent of the population with the lowest incomes. A working definition of "poor" is necessary because public food service programs tend to be aimed particularly, though not exclusively, at the poor. While we will prefer to cite scholars who have studied the population groups in question, the 15- to 20-percent rule of thumb will be used where no other basis has been found. (Interestingly enough, the gerontology literature is the only source to offer a generalization on the proportion of the population particularly needful of help--and there the generalization is 20 percent.)

The school food service program will undoubtedly continue to grow but, as the school lunch component of that activity is a long established program it has its largest growth behind it. A second component of the school food service program, the School Breakfast Program, appears likely to grow substantially in the next 10 to 15 years. The school food service program is also important because, over the years, it has developed a model which seems likely to be adopted in large part by other public food service programs.

Two new programs, now feeding about a half million meals per day, appear likely to grow by many times that size by 1985-90. The smaller of these is the preschool program, while the larger is the congregate meals program for the elderly. A third program, whose future is more difficult to estimate, is the Special Summer Breakfast Program.

National School Food Service Program

The School Lunch Program[*]

The largest and best established public food service program is the School Lunch Program. Discussion in this section will focus on participation rates for schools and students, reasons for nonparticipation, and trends in expenditures. Finally, we will project the probable range of 1985 volume in terms of number of students and dollars.

Participation Rates. As indicated in Table 5.1, institutional participation--that is participation by schools--has risen from 32 percent in 1950 to 79 percent in 1973, while the number of schools participating increased from 54,157 to 86,864. While the proportion of schools participating has more than doubled, the student's participation rate has increased nearly 54 percent from 31.2 percent in 1950 to 48 percent in 1973. This data is summarized in Table 5.2. The scope of the program in terms of physical volume is shown in Table 5.3.

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[*] Data and information for the discussion of the School Lunch Program, unless otherwise cited, comes from:

Anonymous, "Comprehensive Study of the Child Nutrition Programs--July 1974," 93d Congress, Subcommittee on Agricultural Research and General Legislation of the Committee on Agriculture and Forestry, United States Senate (Washington, D.C.: U.S. Government Printing Office, 1974), pp. 26-40 and 54-56.

Table 5.1

National School Lunch Program--Participation (Schools)

Schools (Number)

Year	Total in U.S.	Participating in N.S.L.P.	Rate of Participation
1950	168,985	54,157	32.0
1955	149,562	58,458	39.1
1960	137,836	62,325	45.2
1965	122,101	70,132	57.4
1969	116,307	74,861	64.4
1970	116,307	75,593	65.0
1971	113,332	79,924	70.5
1972	113,332	83,333	73.5
1973	110,240	86,864	78.8

Source: U.S. Department of Agriculture, Food and Nutrition Service

Table 5.2

National School Lunch Program--Participation (Children)

Children (Number)

Year	Total Enrollment	Participating in N.S.L.P.	Rate of Participation
1950	27,525,345	8,596,765	31.2
1955	34,029,035	12,030,970	35.4
1960	40,664,042	14,078,149	34.6
1965	48,151,723	18,666,270	38.8
1969	51,733,867	22,078,808	42.7
1970	52,100,765	23,127,222	44.4
1971	51,982,123	24,639,663	47.4
1972	51,982,123	24,940,507	48.0
1973	51,221,983	24,433,000	47.7

Source: U.S. Department of Agriculture, Food and Nutrition Service

Table 5.3

National School Lunch Program--Lunches Served

Year	Total	Free or Reduced	Free or Reduced % of Total
1950	1,275,923,146	212,193,369	16.6
1955	1,806,586,577	189,878,731	10.5
1960	2,142,312,115	217,192,652	10.1
1965	2,892,260,684	285,839,648	9.9
1969	3,368,155,438	507,705,712	15.1
1970	3,565,092,824	738,541,361	20.7
1971	3,848,301,437	1,055,691,831	26.1
1972	3,972,137,146	1,285,332,221	32.4

Source: U.S. Department of Agriculture, Food and Nutrition Service

Non-Participation. In order to assess the problem of participation, some consideration of the difficulties of the data available is necessary. First of all, the 47.7 percent participation rate shown in Table 5.2 is computed on the assumption that students eat all lunches during each week. Since students, on average, appear to eat four out of five lunches in the program, the real participation rate--i.e., the percent of students sometimes but not always eating in the program--must be higher than that shown.

The school lunch program is available to 78.8 percent of schools, but those schools have 85.7 percent of enrollments. Since students who choose to order a la carte, where such service is available, are not counted as participating in the program, a substantial understatement of "students buying lunch from the school cafeteria" is inherent in the USDA figures.

Two kinds of reasons are cited for non-participation: physical and attitudinal. The physical hindrances are perceived as relatively more easy to overcome:

> Solutions are readily available for these problems. Most of them center around the school's belief that they need a full stainless steel kitchen. Many alternative methods to on-site kitchens are available, requiring little in the way of facilities. Satellite operations, prepackaged meals, the cup-can system, or bag lunches can provide, without major delays, an interim or more lasting means of feeding children.

A far more difficult challenge in reaching schools without food service is overcoming the attitudinal reasons for not participating. Although there are many attitudinal reasons, a few basic reasons predominate. The following list summarizes these reasons:

1. The principal or superintendent is against school lunches. Many principals and superintendents are reluctant to start lunch programs because these programs will increase their work and responsibilities.
2. The teachers are against school lunches. The teachers do not want to have a lunch program in the school because they believe it will interfere with their own lunch hour.
3. Children walk home for lunch. The community adheres to the neighborhood school concept.
4. Private schools have too many other demands on their often limited funds. When faced with lack of funds to pay teachers' salaries and other operating costs, many private school officials give low priority to food service programs.
5. Some private schools refuse Federal funds. These schools want to operate completely free of any State or Federal assistance.
6. The school has its own food service program. Over 5,000 schools operate their own food service without Federal assistance. These schools have chosen not to participate. Often, their lunch programs are designed to be profitmaking and the cost to students is high.

To these difficulties another authority would add split sessions, busing (which sees children on buses in the time period they might be eating), the short period of time some schools allow for lunch, and coop programs which take the student out of the school for as much as a half-day (8a).

Non-participation tends to be higher among urban, non-needy students. Secondary school students participate less than primary school students. Participation is also seen as affected by forms of competition including bag lunches brought from home, off-campus food service facilities and, as noted earlier, a school's own a la carte service.

Prices charged also have a substantial effect on participation. Five studies conducted under USDA sponsorship indicate that paying students respond by reducing participation 3 to 6 percent for every 10 percent increase in prices charged, with most results falling in a 4- to 5-percent response range. USDA estimates that 90 percent of the average daily attendance would participate under a Universal Free Lunch. (This 90-percent level will be adopted as our high estimate for this program.)

Other factors that may positively influence participation include such institutional factors as "selling" the program to teachers and administrators, improvement of facilities (particularly to make lunch rooms more cheerful), and scheduling of lunch breaks to facilitate student's eating by providing more time. Operational factors include better merchandising, improving quality and menu variety, and involving students in planning.

Cost of School Lunch

The total cost of school lunch has increased by more than eight times since 1950 but that cost, stated in constant dollars, has risen 4.4 times, as shown in Table 5.4. Table 5.5 shows the changing shares paid by the various sources of funding. In 1950, the federal share of the program's cost was 32.5 percent and the state and local government's 19.9 percent, while the child's share was nearly half (47.6 percent). By 1973, the federal share had risen to 40 percent and the state and local share to 22.7 percent, while the child's share had fallen to just over one-third (37.3 percent). (Note that this "child's share" is an average for all children including those who receive free and reduced price lunches. The subsidy from federal funds to children who pay full price is currently 21.25 cents.) The federal participation increased $.084 and the states' $.039 in constant dollars, while the child's share, on average, fell $.035 in the same period. The total cost showed only a small change in constant terms, remaining between $.65 and $.69 until 1973 when it rose over 4¢ to $.74 in constant terms.

Table 5.4

National School Lunch Program Contributions (Thousands of Dollars)

Year	Federal[1]	State and Local[2]	TOTAL (Federal, State, and Local Contributions)	TOTAL (In 1972 Constant Dollars)
1950	119,754	247,889	376,643	638,935
1955	152,278	459,261	611,539	955,530
1960	225,839	775,837	1,001,676	1,414,997
1965	402,843	1,089,954	1,492,797	1,979,312
1969	475,752	1,516,497	1,992,249	2,273,478
1970	565,451	1,651,610	2,217,061	2,388,560
1971	809,540	1,683,531	2,493,072	2,575,222
1972	1,050,832	1,696,424	2,747,257	2,747,257
1973	1,207,600	1,807,100	3,014,700	2,838,700

[1] Federal Contributions = Cash and Donated Commodities

[2] State and Local Contributions = Children's Payments, State and Local Government Contributions, and other Cash Income (e.g., from individuals or civic groups; sales of food to adults; value of donated services, equipment, and commodities)

Source: U.S. Department of Agriculture, Food and Nutrition Service

Table 5.5

National School Lunch Program--Cost Per Lunch (Dollars)

	Federal Contributions		State and Local Contributions		Children's Payments		Total	
	Dollars	1972 Constant Dollars	Dollars	1972 Constant Dollars	Dollars	1972 Constant Dollars	Dollars	1972 Constant Dollars
1950	.121	.212	.074	.129	.177	.310	.372	.652
1955	.100	.156	.083	.129	.221	.345	.404	.631
1960	.105	.150	.103	.147	.259	.370	.467	.667
1965	.139	.185	.101	.134	.276	.363	.516	.688
1969	.141	.160	.141	.160	.309	.351	.591	.671
1970	.159	.170	.153	.164	.310	.333	.622	.668
1971	.210	.216	.154	.158	.283	.291	.647	.667
1972	.265	.265	.155	.155	.272	.272	.692	.692
1973	.314	.296	.178	.168	.292	.275	.784	.738

Source: U.S. Department of Agriculture, Food and Nutrition Service

Projected Participation and Cost

The key to projecting the size and scope of the school lunch program in 1985 is the degree to which participation will rise. The National School Lunch Program (NSLP) is already available in schools with 85.7 percent of the enrollments, and another 4.3 percent of enrollments are accounted for by non-NSLP school lunch operators. Thus, limited growth can be expected through exposing the remaining 10 percent of the enrollment to the NSLP. A minimum participation rate assumption for 1985 would be that a lunch program would be available in all schools and that the participation rate for school now offering school lunch of 62 percent would obtain. Such limited increase in student participation could result from there being no further increase in the level of government subsidy to the lunch program and a failure to adopt better and more flexible merchandising and menu planning strategies.

The most extensive participation likely to occur would result from adopting a Universal Free Lunch program. This is projected at 90 percent by USDA on the basis of limited studies.

Obviously, the size of the school lunch program is a function of the size of the student body. The 1985 student body is projected to be 44.6 million students while that of 1990 is forecast to be 46.9 (6). The projections are shown in Table 5.6, which also compares projected participation rates and enrollments with those of 1950 and 1970. The decline in

Table 5.6

Participation Rates--Actual and Projected National School Lunch Program

1950 - 1990

	% Participation			Total Enrollment	Number Participating (Millions of Students		
Year	Actual	Low	High	Millions of Students	Actual	Low	High
1950	31.2			27.5	8.6		
1970	44.4			52.1	23.1		
1985		62	90	44.6		27.6	40.1
1990				46.9		29.1	42.2

Source: (1950 and 1970 data)
U.S. Department of Agriculture, Food and Nutrition Service

school enrollments from 1973's 51.2 million acts to reduce the increase in the absolute number participating somewhat. Participation projections range between a low of 27.6 million and a high of 42.2 million students.

In the past five years, students have eaten between 152 and 159 meals on average during the year. In Table 5.7, dollar volume, in 1972 dollars, is projected on the basis of 155 meals per year at an average total cost of $.75 for the low and high participation projections. The resulting dollar volume projections range from a fairly modest $3.2 billion in 1985 (compared with 1973's $2.8 billion in 1972 dollars) to a high of just under $5 billion in 1990. The mid-point of the projected range is $3.9 billion in 1985 and $4.1 billion in 1990, suggesting a program whose total volume will be in the range of $4 billion. This constitutes an increase of 66 percent over 1970's level which is clearly a substantial growth. On the other hand, the scope of the NSLP, expressed in total expenditures in constant dollars increase nearly three times (274 percent) in the 20 years from 1950 to 1970.

Special Milk Program

Table 5.8 presents the statistical history of the special milk program. As that table makes clear, this program enjoyed substantial growth until 1970 but has since experienced some retrenchment. While it is entirely possible to speculate that the program will once again begin to grow,

Table 5.7

Dollar Volume of the School Lunch Program

Year	Number of Participating (Millions of Students) Actual	Low	High	Average Number of Meals per Participant	Number of Lunches (Millions of Lunches) Actual	Low	High	Total Cost (Millions of 1972 Constant Collars) Actual	Low	High
1950	8.6			147	1,276			$ 639		
1970	23.1			154	3,565			2,389		
1985		27.6	40.1	155		4,278	6,216		3,208	4,662
1990		29.1	42.2	155		4,510	6,541		3,382	4,906

Source: U.S. Department of Agriculture, Food and Nutrition Service (1950 and 1970 data)

Table 5.8

Special Milk Program: Outlets, Children Served, & Federal Expenditures

Year	Outlets[1] Schools	 Child-Care Institutions	 Total	Total Children Served[2]	Federal Expenditures (dollars) Total	Total (In 1972 Constant Dollars)
1950						
1955	41,094		41,094	449,810	17,149,787	26,796,542
1960	79,738	4,184	83,922	2,384,700	80,479,992	113,688,363
1965	85,929	6,076	92,005	2,966,766	97,416,327	129,165,907
1969	90,055	8,327	98,382	2,944,423	101,281,180	115,578,203
1970	89,277	7,937	97,214	2,901,931	101,163,760	108,989,183
1971	90,923	6,661	97,584	2,569,975	91,081,313	94,083,166
1972	90,804	6,397	97,201	2,498,215	90,286,027	90,286,027

[1] Peak Month Nationally. Child care institutions did not participate in program during fiscal years 1950 and 1955.

[2] Children served = Thousand half-pints served

Source: United States Department of Agriculture, Food and Nutrition Service
Fiscal Year 1972 Statistics and Historical Tables

it seems clear that it will not involve any significant increment of food service labor. Accordingly, no further consideration is given to this program in the preparation of this scenario.

School Breakfast Program

The school breakfast program is a relatively new activity but one which has demonstrated considerable growth in a short time. Pertinent statistics are summarized in Table 5.9. The current rate of participation in the school breakfast program is approximately 3 percent of the total enrollment and over 80 percent of participants have qualified for free and reduced price status. Since 1969, expenditures in constant dollars have increased by a factor of 10 because of increased participation rates which have tripled, and because of a substantial increase in the funding level from approximately 15¢ to 25¢ per breakfast.

Unlike the lunch and milk programs, the breakfast program is aimed principally at children in poorer families. One avenue for projecting the size of this program in 1985 is to assume that this minimal goal continues to obtain and that children of poor families make up 80 percent of the program's clientele. Relying on the notion propounded by Lyday referred to earlier that our society has defined the lower 15 to 20 percent of its population as poor, it is possible to use that range as one estimate of the size of the clientele of the program. Because of the preference

Table 5.9

School Breakfast Program

YEAR	SCHOOLS			CHILDREN			BREAKFASTS		FEDERAL REIMBURSEMENT	
	Total in U.S.	Participating in Breakfast Program	Rate of Participation	Total Enrollment in U.S.	Participating in Breakfast Program	Rate of Participation	Rate of Free or Reduced	Average Indemnity Rate (¢)	Total Dollars	Total in 1972 Constant Dollar
1969	116,307	n.a.	n.a.	51,733,867	n.a.	n.a.	n.a.	n.a.	5,402,000*	6,164,555
1970	116,307	4,270	3.7	52,100,765	535,610	1.0	71.5	15.0	10,786,000*	11,620,340
1971	113,332	6,551	5.8	51,982,123	959,555	1.8	76.3	15.4	19,383,000*	20,021,692
1972	113,332	7,865	6.8	51,982,123	1,140,030	2.0	78.5	14.7	24,934,466	24,934,466
1973	110,240	9,704	8.8	51,221,983	1,312,775	2.6	83.4	17.6	37,002,000	34,842,000
1974	n.a.	11,900	n.a.	n.a.	1,550,000	n.a.	83.0	25.0	70,119,000	61,454,000

Sources: Fiscal Year 1972 Statistics and Historical Tables, United States Department of Agriculture, Food and Nutrition Service.

Comprehensive Study of the Child Nutrition Programs, July 1974, Committee Print, U.S. Senate Committee on Agriculture and Forestry. (1974 data are estimated)

*Agricultural Statistics, 1974

many working mothers have to see their children off to school before going to work themselves, the lower of these two figures might serve as a low estimate of the proportion of the school age population participating in the School Breakfast Program, or 7,331,000 in 1985 and 8,024,000 in 1990. Since this group of poor children constitutes 80 percent of the participants, the total participation can be projected at 9,164,000 and 10,030,000.

To arrive at a high estimate, a somewhat different set of assumptions is useful. Just as the school lunch program has come to be accepted as a service to be expected from the school system as a part of the normal course of events, the School Breakfast Program, in the next 10 to 15 years, may achieve a similar acceptance, particularly among children of working mothers. (This, in fact, is the intent of legislation presently being considered by Congress and which a number of authorities expect to pass in the current session.) Thus, a high assumption can be adopted that the number of participants in the school breakfast program will be defined by the number of children of working mothers.

Work force participation by women, it is widely recognized, has risen dramatically in recent years. In 1960, 37.1 percent of American women were in the work force, but by 1970 that proportion had risen to 48.2 percent. (12) In 1973, 43.9 percent of women living in husband-wife families or in families headed by a woman were in the work force. In 1970, 43.2 percent of children 6 to 17 years of age had working mothers, and that proportion had risen 44.8 percent by 1973 (22). Work force participation for all women has been authoritatively projected to rise from current levels to 45.6 percent in 1985 and 45.9 percent in 1990 in a levelling off process attributable to the changing age mix of the female population (12).

If we hold to the same conservative notion that there is resistance in many families to sending a child out of the home to breakfast both because of family values and the logistical simplicity of making breakfast for the children at the same time a mother prepares her own breakfast, some proportion of the children of working mothers may still be expected to opt for a breakfast at home. If we assume that 45 percent of the children in the school system have working mothers by 1985-90 and that one-third of them choose to eat breakfast at home in spite of a wider societal acceptance of the School Breakfast Program, then 30 percent of the school age population may be expected to eat breakfast, or 14,662,000 students in 1985 and 16,049,000 in 1990.

To project the total dollar cost, a per-student cost is required. The annual reimbursement per participant for 1974 (which, it will be recalled, is a substantial increase over the previous support levels) of $45.25, converted to 1972 dollars is $39.65. Reimbursement may not exceed 80 percent of total program cost. (It is, reportedly often less than 80 percent with student, state and local government contributing more than 20 percent.) If the constant dollar reimbursement remains at a level of approximately $40 per year, then an annual cost may be estimated at $50 per student leading to a low estimate in 1985 of $366.6 million and a high estimate of $733.1. For 1990, the comparable figures would be between $401 million and $802 million. The calculations are summarized in Table 5.10.

The School Food Service Model

The school lunch program offers a long history, and its experience can be expected to be used in designing other public food service programs. It is therefore useful to consider that program as a general model for public food service programs.

First of all, the program provides a subsidy to all participants. In school lunch, the federal subsidy to paying students, for instance, is currently 21.25¢. Secondly, the program encourages state and local matching funds provisions in order to gain the benefits of the program for state and local populations. Thus, the program encourages a pooling of subsidies of several levels of government to be made available to all users.

Thirdly, the subsidies available attract participants because what is offered is a bargain from the point of view of the comparable cost of food service from some other source. Fourthly, the capital cost of the facilities used is borne by government agencies with partial federal funding or subsidization of equipment purchases encouraging the establishment of appropriate facilities where they are lacking.

Table 5.10

Projected and Actual Participation and Cost of the School Breakfast Program

1970 - 1990

Actual

Year	Participation Rate	Number of Participants	Annual Cost Per Participant Constant 1972 Dollars	Total Cost Constant 1972 Dollars
1970	1.0%	535,610	$21.69	$ 11,620,340
1971	1.8%	959,555	20.86	20,021,692
1972	2.0%	1,140,030	21.87	24,934,466
1973	2.6%	1,312,775	26.54	34,842,000
1974*	n.a.	1,550,000*	39.65	61,454,000

Projected

Year	Participation Rate	Number of Participants	Annual Cost Per Participant Constant 1972 Dollars	Total Cost Constant 1972 Dollars
1985	15% to 30%	7,331,000 to 14,662,000	50.00	366,600,000 to 733,100,000
1990	15% to 30%	8,024,000 to 16,049,000	50.00	401,200,000 to 802,450,000

*USDA Preliminary Data

Finally, the pattern of administration is one of general monitering against fairly broad guidelines at the national and state level with most operational decisions made entirely at a local level. Technical advice, however, is also made available. Thus, the model encourages adaptation to local tastes and conditions. Such a model has much to recommend itself in programs now in the early development stage, like the Congregate Meals Program discussed later in this section.

Preschool Food Service Programs

At the present time some 380,000 children in 8,500 centers participate in a federally funded "Special Food Service Program for Children." (18) By 1985 the figure of 380,000 will almost certainly have grown manyfold. Three factors interact to make this probable. The first of these is increasing participation of women in general and particularly of mothers with young children in the work force. The second factor is the increasing participation in preschool programs of children regardless of family circumstances. The third factor is contained in legislation which has passed the House and is presently pending before the Senate, which authorizes performance funding for preschool feeding programs on the same basis as is presently available to School Lunch. These factors are considered at greater length below.

Working Mothers

A number of factors appear to effect child care arrangements made by mothers with children under six who enter the work force. In general, the preferred child care arrangement is the family. Mothers generally use older children or, if available, other relatives to care for children. When this is not possible, some institutional arrangement is considered. (13) The trend toward smaller family size, therefore, can be seen as interacting with the trend toward higher participation by younger mothers in the work force to increase the demand for day care and other preschool arrangements. In regard to the second factor,

> . . . in recent years the most rapid gains in labor force participation rates among women have occurred among wives under the age of 35, and especially among those with children under six. (22)

A recent study reported that "for every woman who left her child in a day care center or home there were three who were willing to do so." (13) Thus, adequate day care facilities to meet present needs are seen as not currently available.

Preschool Participation

As Table 5.11 indicates, the participation rate in nursery school and kindergarten has risen dramatically since 1964 from 25.5 percent to nearly 41 percent of the children aged three to five. Thus, in spite of a decrease in the population group of that size, the number of children en-

Table 5.11

Number of 3- to 5-Year Old Children Enrolled in Nursery School and Kindergarten

October 1964 to October 1973

Year	Total Children 3 to 5 years old (000 omitted)	Enrolled in nursery school and kindergarten	
		Number (000 omitted)	Percent
1964	12,496	3,187	25.5
1965	12,549	3,407	27.1
1966	12,486	3,674	29.4
1967	12,242	3,868	31.6
1968	11,905	3,928	33.0
1969	11,424	3,949	34.6
1970	10,949	4,104	37.5
1971	10,610	4,148	39.1
1972	10,166	4,231	41.6
1973	10,344	4,234	40.9

Source: U.S. Department of Commerce, Bureau of the Census, "Nursery School and Kindergarten Enrollment: October 1973," Current Population Reports, Series P-20, No. 268, August 1974, p. 1.

rolled in nursery school and kindergarten has increased in the period. The increasing popularity of preschool programs appears to have arisen largely because of the increasing recognition of the value of this educational experience and thus is, in significant degree, independent of increasing female work force participation.

The figures in Table 5.11 do not include children in essentially non-educational, day care settings. Unfortunately, a reliable national figure is not presently available on the number of children in such settings but one authority has estimated that the proportion of children in day care centers is 12 percent of the age cohort three to five.* Since 43 percent of children, aged three to five, were enrolled in kindergarten or nursery school, some 55 percent of that age group are probably in some public setting and, thus, as will be seen, eligible for a form of school food service.

There are a number of factors which are likely to inhibit further increases in preschool enrollment. These are largely institutional in nature. Nursery school programs have not yet been seen by most public school systems as a necessary part of their services and consequently these schools tend to be private. Since most systems do offer kindergarten and the vast majority of children eligible for participation in kindergarten are enrolled, the growth in enrollments would have to come principally from three and four year olds. A rapid increase in enrollment in that age group would require development of substantial facilities (i.e., school buildings) if this need were to be met by the public school system. Such a development is hindered by the fact that, since school systems are largely financed locally, their ability to add a major new program is subject to the decisions of the many local electorates to whom school boards are accountable. The decentralized nature of decision making in education suggests a gradual development of new programs or generous federal subsidies encouraging the development of private facilities, which seems unlikely.

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*The writer is indebted to Mr. Larry Suiter, Chief, Educational Branch of the Population Division of the Bureau of the Census for this estimate.

Government Policy

While educational systems are locally controlled, federal food service programs are subject to the central decision making and the appropriating power of Congress. As noted earlier, very substantial federal support tends to call into play local matching funds to obtain substantial growth in a program. The 1975 Amendments to the National School Lunch and Child Nutrition Act, which have passed the House and are expected to pass the Senate, provide performance funding for feeding programs in all preschool settings, both public and private.

Performance funding means that any qualified school wishing to do so may apply for and run a school lunch program. The present program, on the other hand, is criticized as administratively cumbersome. Reimbursements are contingent on institutional admission to a state program. Not all states have supported the program. Funds have often been inadequate to meet enrolled programs, and so, many institutions have been discouraged from participating. (18)

The basic dynamism in the preschool program comes, in part, from increasing enrollments and, in part, from the fact that eligibility of preschoolers for participation in the benefits of the NSLP are likely to become law in the foreseeable future, creating a surge in participation.

Undoubtedly the next hurdle will be adequate funding. As is widely recognized, in the United States enabling legislation is passed which "authorizes" an activity, but subsequently a separate bill must be passed appropriating monies to carry out the program. For this reason, the passage by the House in April of 1975 and expected passage by the Senate during its current session of these amendments need not be viewed as making automatically and immediately available the program of preschool feeding described. On the other hand, while there is commonly a delay between authorization and appropriation in many programs, the history of the School Lunch Program strongly suggests that in due time appropriations do follow the programmatic intentions of Congress. Certainly by 1985, it seems reasonable to assume that the appropriation process will have "caught up" with the authorization process.

Projection of Participants

In 1985, there will be approximately 12,990,000 children aged three to five and that number is expected to grow to 13,900,000 by 1990. (5) Mr. Suiter of the Bureau of the Census (20) estimated that enrollments in preschool programs will rise from 55 percent to 65 percent of the age group from three to five, largely on the grounds that the absence of nursery school facilities and programs would prevent more rapid growth. On the other hand, assumption of a rapid increase in (non-school) day care facilities as well as use of idle school rooms made available by decreasing school populations would support an estimate of 80 percent of the age cohort. These percentages yield enrollments of from 8,444,000 to 10,390,000 in 1985 and 9,035,000 to 11,112,000 in 1990.

Projecting Level of Expenditure. The matter of determining the cost of the program is complicated by the services to be rendered to preschool children which include not only lunch but breakfast, dinner and snacks. In a recent study (18) based on a ten-state sample, most children received lunch and one snack. About half the children also received breakfast and a second snack. About 10 percent received dinner.

In viewing this pattern, it seems appropriate to recall that the program which is presently in operation and on which the study cited is based, is principally directed at lower income children. Thus the proportion of children requiring breakfast is substantially higher than the earlier estimate of 30-percent participation projected for all students in the breakfast program. Accordingly, a 20-percent figure may be a more reasonable participation rate for the breakfast meal for preschool children.

Similarly, the 10-percent dinner participation may be somewhat high to project for the population as a whole. Accordingly--and somewhat arbitrarily--a 5-percent rate is adopted for projecting participation of this meal. Children receiving dinner are assumed to receive a second snack, while all other participants are assumed to receive one snack.

Lunch participation has been estimated at 60 percent, based on the minimum estimated participation rate for school children put forward earlier, which was 62 percent.

The actual cost of the meals served has not been offset by USDA reimbursements. Since the total cost must be borne by someone, estimates of program cost should use total rather than reimbursement where a reasonable estimate is possible. In the survey conducted by the Children's Foundation cited earlier, average costs per child were found to be as shown in Table 5.12.

Table 5.12

Average Cost Per Child Per Meal

January, 1975

	Cost	USDA Reimbursement
Breakfast	$ .326	$.18
Lunch	.647	.36
Supper	1.010	.36
Snacks	.204	.12

Source: The Children's Foundation

In Table 5.13, these costs are assumed to be representative but have been deflated to 1972 dollars. Table 5.13 summarizes the effect of these assumptions on total annual cost with average consumption of 155 meals per child per year, as in the school lunch projection made earlier. A range of $730 million to $898 million results for 1985 while 1990's estimate ranges from $781 million to $961 million.

Other Special Feeding Programs

At the present time, the "Special Summer Food Service Program" is administratively coupled with preschool programs (at the national and state levels). Tables 5.14 and 5.15 present the recent history of that program. In 1975, the reimbursement rate approved was raised to 81.25¢ for a "regular meal" (generally lunch) and 21.25¢ for a supplement or snack.

Table 5.13

Projected Levels of Participation and Total Program Cost Preschool Food Service Program 1985 - 1990

Year	No. of Students (000 omitted) Participating in the Preschool Program	Participation Rates by Meal			Total Participants (000 omitted)				Daily Program Cost (000 omitted)					Grand Total Annual Cost (000 omitted)
		Breakfast	Lunch	Dinner	Breakfast	Lunch	Dinner	Snacks	Breakfast	Lunch	Dinner	Snacks	Total	
1985														
Low est.	8,444	20%	60%	5%	1,688	5,064	422	5,486	$481	$2,871	$373	$ 982	$4,707	$729,585
High est.	10,390				2,078	6,234	520	6,754	592	3,535	460	1,209	5,796	898,380
1990														
Low est.	9,035	20%	60%	5%	1,807	5,421	452	5,873	515	3,074	400	1,051	5,040	781,200
High est.	11,112				2,222	6,667	556	7,223	633	3,780	492	1,293	6,198	960,690

Table 5.14

Special Summer Food Service Program

Reimbursement Rates	
1969	.178
1970	.304
1971	.281
1972	.387
1973	.514
1974*	.606

Source: Food and Nutrition Service
*USDA Estimate

Table 5.15

Special Summer Food Service Program Participation and Expenditure Levels

1970 - 74

	1970	1971	1972	1973	1974*
Number of Children (July)	461,897	1,079,761	1,437,020	1,437,158	1,700,000
Number of Sites (July)	1,738	5,715	11,160	10,243	11,881
Federal Reimbursements for meals (000 omitted)	$ 6,502	$ 20,383	$ 26,569	$ 32,393	$ 50,000

Source: Food and Nutrition Service
*USDA Estimate

There are a number of imponderables which make estimating any trend in numbers served or dollar cost even more difficult than elsewhere in this section. First of all, the program at present is geographically based and is aimed at "areas of need," generally large urban concentrations. Within that area, most of the population to be served under the present policy is being reached. Thus, a low estimate of participants for 1985 and 90 is on the order of 2,000,000.*

On the other hand, a high estimate might use the 15 to 20 percent assumed to be defined as poor. The lower of those two figures is probably most appropriate since a large number of potential clients may be in rural areas and not accessible to program sites while others, particularly in the upper age brackets, may be employed or otherwise not disposed to submit to the regimentation of organized programs. If the population of interest is taken to be the age groups from 3 through 18, then the maximum likely number of participants in 1985 is 9,204,000 and in 1990 is 10,110,000. If the average cost per participant of $29.41 anticipated for 1974 is applied (deflated to 1972 dollars) then a high projection which assumes a much more aggressive policy of trying to reach the maximum number of poor children, can be reflected. Such a projection would yield a total reimbursement of $238 million in 1985 and $260.8 in 1990. If reimbursement is assumed to be 80 percent of cost--which probably understates cost--then total costs would be $298 million in 1985 and $326 million in 1990. These compare with a low estimate of $51.6 for both years.

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*The author is indebted to Ms. Margaret Gladdin, Acting Manager, Special Feeding Programs Branch, Child Nutrition Division of the Food and Nutrition Service of the Department of Agriculture for much of the information in this section.

Government Food Service Programs for the Elderly

A statistical profile of the elderly in 1974 (65 and over) is presented in Table 5.16. As that table makes clear, just under half of this age group of the population is likely to be living alone--though some of them may be living with relatives--because they are widowed, divorced, or single. Only 13.4 percent of this population group is employed and, as the table indicates, 6 percent have, by this age, withdrawn from the labor force. The median income of the aged in 1974 was $2,785 (or $2,441 in 1972 constant dollars). As Table 5.17 indicates, the actual spendable income of the elderly has shown a substantial increase with median income rising from $1,076 to $2,785 in fifteen years. The constant dollar changes are substantially less, however, from $1,520 in 1972 constant dollars to $2,441. In spite of the relatively modest constant dollar increase in income and the fact that the median income for persons over 65 is still substantially below the poverty income level for the population as a whole, a first important point to be made regarding this age group is that the real money income and real wealth are expanding, particularly for the group (65 to 75) for a number of reasons.

Table 5.16

Population 65 Years Old and Older
Selected Characteristics

(in thousands - except median)

	1974[1]	
	Number	Percent
TOTAL	20,117	100
Single	1,217	6.0
Married	10,781	53.5
Widowed	7,639	37.9
Divorced	480	2.6
Total[2]	20,601	100
Employed	2,778	13.4
Unemployed	95	.6
Not in labor force	17,728	86.0
Persons w/income[3]	19,009	100
Median income	$ 2,785	
Median income in 1972 constant dollars	$ 2,441	

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[1] Marital status data for March 1973; excludes inmates of institutions.

[2] Excludes inmates of institutions.

[3] Persons receiving income in previous calendar year.

Source: U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States 1974, p. 280.

Table 5.17

Median Income of Persons 65 and Over

Actual and Constant 1972 Dollars

	Income in Actual Dollars	Income in Constant 1972 Dollars
1960	1,076	1,520
1965	1,355	1,797
1970	1,937	2,087
1974	2,785	2,441

Source: U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States 1974, p. 280.

Social Security has been tied to the cost of living, and the 1974 legislation on private pension plans improves the protection for the over 50 percent of the workers who are covered by that law. One authority speculates that protection from inflation could come from the cost of living escalator to be required in private pension plans. Another possibility is the government sale of bonds with "interest to be paid in dollars of constant purchasing power." (11) The increasing concern of the elderly with inflation coupled with their growing political power suggests that some form of indexing may be adopted by 1985 for payments to the aging, and this would have a substantial impact on the spending power of these retired persons.

The figures given in Table 5.16, while accurate, substantially understate the real income of elderly persons because they include only cash payments Other sources of wealth to the elderly include the value of an owned home; the annuity value available from real property and investments; such in kind transfers as Medicare, Medicaid, and public housing; and intrafamily transfers. Thus, while the elderly are substantially less wealthy than the average American population, their real income is somewhat understated by the statistics, and there is every appearance that rises in real income that have occurred in the last 15 years will be continued and possibly accelerated. Thus rising purchasing power is an important characteristic to be identified in this population group. (11)

A second characteristic of this population is a trend away from institutionalization and relative helplessness and toward increasing independence afforded by various social services. Up to 1951 the tendency was to institutionalize the infirm aged in mental hospitals. That trend has changed and the admission of persons 65 and over to mental hospitals has decreased by 71 percent in the past 25 years. The institutionalization largely shifted and the aged are now being placed in nursing homes. The nursing home population grew from 554,000 in 1963 to 1,098,500 ten years later. This approach to caring for the elderly, Kahn has labeled "custodialism." (14)

Kahn identified several trends that run counter to custodialism among the aged. In the future, the aged population will be better educated. Today the median educational achievement of our elderly population is the eighth grade, but by 1990 the median educational attainment will be that of a high school graduate. Moreover, Kahn points out that far fewer numbers of the aging would be foreign-born. A combination of native birth, better education, and rising income suggests a higher social status for the aged. Kahn also suggests that accompanying this will be more social and political awareness (14).

Moreover, as Golant points out, not only are the elderly less likely to be institutionalized, but they are also less likely to be living with their children.

> In 1950, for example, 16% of the 65 plus population lived in the household of a child but the proportion had dropped to 9% by 1970. Since 1950 there has also been a decline in the proportion of elderly persons living in households headed by other relatives. Between 1950 and 1970 the elderly household rate (i.e., the percentage of 65 plus population who headed their own households) increased from 52% to 61%. These trends are reflected in the changing size of elderly households. The proportion of elderly persons living alone has almost doubled since 1950 and in 1970 represented 40% of all households in the United States headed by persons 65 plus. (10)

In contrast to the "custodialism of the past," Kahn calls for a strategy of minimum intervention.

> Intervention can be harmful as well as helpful. Although the sources for intervention should be available when needed, it is best to follow a policy of minimal intervention; that is, intervention that is least disruptive of the usual functioning in the usual setting. Thus, it would be more sensible to provide care in the home or day care center than in the hospital; in the storefront rather than in the clinic; in the neighborhood rather than downtown; for brief rather than long periods; with neighborhood personnel rather than with explicit medical or social agencies professionals. (14)

Finally, Tobin suggests that one basic institution for dealing with the aged that is prominently emerging is "the community-based, local or neighborhood organization." (21)

Thus, in viewing the aged of the period of 1985 to 1990 we would think in terms of a group relatively more affluent than the present group, living independently in their own homes rather than gathered together in institutionalized settings or living with relatives.

A third dynamic that should be considered is the possibility that the definition of aging and aged will change with lower retirement ages. Newgarten has speculated that by the year 2000 a lower retirement age of 55 will obtain and suggests the distinction between the "young-old" may be those who are age 55 to 75 rather than the definition which currently applies which is 65 to 75. (17) (A second group of aged are those 75 and older, referred to as the "old-old," seen as requiring more social services than the "young-old.") The possibility that persons may have an option of retiring at age 55 is a substantial dynamic. It seems reasonable to speculate that those choosing retirement benefits might be those who have limited skills and hence are only marginally employable. Shifting such a group from unemployment to old age assistance and qualifying them for a full range of social services would logically result in a very high proportion of them seeking the full panoply of those services increasingly being made available to the elderly, including food service and, specifically, the Congregate Meals Program. A dynamic which is difficult to quantify but which may prove highly significant is that the aging population of 1985-90 is likely to be more accustomed to relying on public support for services as compared with today's elderly who are still quite self-reliant and suspicious of "something for nothing."

Congregate Meals Program

The congregate meals program at the present time is a very small one.

> In May 1974, 664 nutrition projects were serving 188,253 meals daily at 4,714 meal sites--the states have estimated that they will be serving 212,000 a day when all projects are fully operational and it is anticipated that they will reach this goal during June of 1974. (3)

As with many government programs which begin in a small way, however, the congregate meals program, in its present state, is clearly the nose of a very large camel. According to information provided by the Administration on Aging,

> . . . the national nutrition program for the elderly--is designed to provide older Americans, particularly those with low income, with low cost, nutritionally sound meals--Emphasis is given to providing these meals in group settings such as schools, etc.---The nutrition projects are to provide at least one hot meal a day (meeting one-third of the daily nutritional requirements) five days a week--to older citizens (60+) and their spouses of any age. (1)

These projects are to include outreach programs to search for persons in need of service and provision for transportation to the group meal sites. As noted in the above quote, the population entitled under this act is that age 60 or over rather than the conventional retirement age of 65 and over. It is clear that the intention of the Act is inclusive rather than exclusive; that is, it is intended to supply services not just to the poor but to any persons who are disposed to avail themselves of those services. As the Fact Sheet specifies:

> Regulations promulgated by the Secretary of HEW provide that individuals eligible to receive meals are 'those persons age 60 or over who: (1) cannot afford to eat adequately; (2) lack the skills and knowledge to select and prepare nourishing and well balanced meals; (3) have limited mobility which may impair their capacity to shop and cook for themselves;

> or (4) have feelings of rejection and loneliness which obliterate the incentive necessary to prepare and eat a meal alone. (1)

While participants will be given an opportunity to pay all or part of the cost of the meals, "no means test will be made and no one will be turned away on the basis of their inability to pay for a meal--each individual participant will determine for himself what he is able to contribute." (1)

In considering the market for food services to the aged in 1985 it has been suggested earlier that this population group will be relatively more affluent, mobile, and independent. These factors suggest that this market for food services in general will be a much more dynamic market than it has in previous times when the aged were relatively poorer, institutionalized, and dependent. Moreover, the elderly of the future are much less likely to be leary of accepting government services than is the case today.

One specific segment of the market which we are examining in this scenario is that of the Congregate Meals Program. It should be noted that this program has goals which go substantially beyond those of avoiding hunger and are congruent with the greater independence anticipated above for the aging.

> In addition to promotion of better health among the older segment of the population through improved nutrition, the program can help reduce the isolation of the aged, offering older Americans an opportunity to continue to participate in community activities and to combine food and friendship. (1)

It is clear that the Congregate Meals Program will be a part of the congeries of social service to be made available probably through the same "community based local or neighborhood organization" that is administering other services. The kinds of concerns we may expect this program to address are suggested by a research project being conducted at this University entitled "The Evaluation of the Social-Psychological Aspects of the Congregate Meals Program." This study will report not only on demographic characteristics of those receiving congregate meals, but also on topics such as "life satisfaction" and "social relationships." (19)

Projection to 1985-90: Number of Participants

As of June, 1975, the Congregate Meals Program was serving about 338,000 meals per day, up from 212,000 in May of 1974.* There are, reportedly, documented waiting lists of 140,000 additional persons who are qualified but unable to obtain services.

If the 15 to 20-percent rule of thumb has any validity at all, it is clear that only a very small part of the potential clientele is being served by what is essentially a pilot program.

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*The author is indebted to Mr. Charles Wells, Deputy Director, Office of State and Community Programs, Administration on Aging, for this estimate and other estimated current operating data in this section and the next. Ms. D. Kilmer of the Staff of the Senate Special Committee on Aging was also most helpful.

In 1985 there will be 36,012,000 Americans over 60, and that age group is expected to comprise 37,653,000 in 1990. A lower limit estimate of the population to be served of 15 percent is a reasonably conservative one. The Administration on Aging speaks in terms of 25 percent of today's elderly population as living below the poverty threshold. (23)

To arrive at an upper limit estimate, recall that the gerontology literature indicates a likely retirement age of 55 in the foreseeable future. Thus, an upper limit estimate of 20 percent of the population over 55 seems reasonable. As Table 5.18 indicates, that population group will range between 46,908,000 in 1985 and 47,811,000 in 1990.

Projection: Dollar Funding Levels

Current operating results, according to the Administration on Aging are $1.50 per person per day for meal service and raw food cost. If this is translated to 1972 dollars, a $1.30 cost results. The projections of number of clients and dollar funding levels to 1990 found in Table 5.19 assume that the current cost expressed in 1972 dollars, or $1.30 will be maintained. As that table indicates, using the assumption above, funding of between $1.8 billion and $3.2 billion may be expected by the period 1985-90.

Table 5.18

Population Over 55 in the U.S. by Age Group

1985 and 1990
(000 omitted)

	Population	
Age Group	1985	1990
55-59	10,896	10,258
60-64	10,495	10,143
65-69	8,727	9,396
70-74	6,935	7,379
60-74	26,157	26,918
75-79	4,971	5,365
80-84	2,915	3,308
85 and over	1,969	2,062
75 and over	9,855	10,753
60 and over	36,012	37,653
55 and over	46,908	47,811

Source: Current Population Reports, Series P-25, No. 541.

Table 5.19

Projected Participation and Program Cost

Congregate Meals Program

1985 - 1990

	1985		1990	
	Low	High	Low	High
Number of Participants (000 omitted)	5,402	9,382	5,648	9,562
Cost per Participant (260 days x 1.30)	$338		$338	
Program Cost (Millions of 1972 Dollars)	$1,826	$3,171	$1,909	$3,232

An Overview of the Future of Government Food Service Programs in 1985-1990

Table 5.20 presents an overview of the five public feeding programs considered, while Table 5.21 compares total projections to current levels. Three significant conclusions may be deduced from this information. First of all, in 1973 these five programs accounted for 7.1 percent of the total Food Away From Home market. The low projections to 1985 show the market share for these programs rising to 9.4 percent.

Secondly, while it is entirely possible that the high estimates overstate the growth, if only half of the growth differential between low and high projection were to take place, government feeding programs would increase their market share of Food Away From Home to 12 percent if the high projections are accepted, the growth is 14.6 percent of the market--double the current level. Put another way, while the total market for food consumed away from home is projected to increase 56 percent from 1973 to 1985, government supported food service programs are expected to grow between a low estimate of 104 percent and a high of 219 percent.

A third significant conclusion lies in the pattern of that growth. In 1973, 94 percent of the dollar volume of government food service was in school food service. By 1985-90 the lunch program will make up something on the order of half of this market (between 48 and 52 percent). Another 5 to 6 percent of this sector will be in what

Table 5.20

Summary of Projected Growth

1973 - 1990

Program	Projected Participants (Millions)				Projected Program Cost (Millions of 1972 Dollars)				Program Expenditures 1973 (Millions of 1972 Dollars
	1985		1990		1985		1990		
	Low	High	Low	High	Low	High	Low	High	
School Year Programs									
National School Lunch Program	27.6	40.1	29.1	42.2	$3,208	$4,662	$3,382	$4,906	$2,839
School Breakfast Program	7.3	14.7	8.0	16.0	337	586	401	642	35
Preschool Program (Participants for Lunch)	5.1	6.2	5.4	6.7	730	898	781	961	22
Total, School Year Programs Participants	40.0	61.0	42.5	64.9					
Year Round Programs									
Congregate Meals Program	5.4	9.4	5.6	9.6	1,826	3,171	1,909	3,232	88*
Summer Programs									
Special Summer Food Service Program	2.0	9.2	2.0	10.1	52	298	52	326	30
Total Program Cost					6,153	9,615	6,606	10,067	3,014

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*1974 in 1972 dollars

Table 5.21

Relative Size of Government Food Service Programs

1985 - 1990

(000 omitted)

	1973		1985	
	Dollars	Percent	Dollars	Percent
Standard World Projected Total Sales of Food Away From Home	42,023,000	100.0	65,635,000	100.0
Projected Government Food Service Programs				
Low	3,014,000*	7.1	6,153,000	9.4
High			9,615,000	14.6
Mid-range			7,884,000	12.0

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*1972 Dollars

amounts to an extension of the NSLP, the school breakfast program, which will use the same facilities and, probably to a substantial degree, the same staff. On the other hand, over 40 percent of the effort will be programs which are, today, relatively new: congregate feeding, preschool feeding, and the special summer program.

In 1973, one-third (32.7 percent) of the cost of the school lunch program was used to pay employees, and clearly, the demand for food service workers in government programs, in general, will be a significant factor in the food service work force. Moreover, a significant part of that demand will come from entirely new programs which will offer entering workers substantial opportunities for advancement.

Food Production and Distribution Systems

Given large groups of Americans entitled to services under authorization legislation but presently unable to obtain them because of funding levels, the projected range of growth in government food service programs appears reasonable. This growth, however, will be accomplished during a time when the commercial food service industry will also be growing rapidly. Total sales in eating and drinking places in the Standard World projections grow from a 1973 level of $42 billion to one of $65.6 billion in 1985, an increase of more than 50 percent (see Table 2.5 p. 26). This growth in sales is projected to lead to an increase of employment in eating and drinking places of from 3,472,900 persons in 1973 to 5,468,512 in 1985. This is an increase of 63.7 percent in a period when the labor force is expected to grow approximately 22 percent. Clearly, the current shortage of skilled workers will become more intense. Added to the labor supply pressures, the cost pressures arising from social policy which tend to increase the floor under labor costs will probably continue. For these reasons, it seems likely that there will be a very significant increase in centralized food service systems that use commissaries of one kind or another and offer substantial advantages in worker productivity and purchasing food economies.

One approach to the development of a commissary is presented in Volume II of this report, Centralized Food Service Systems. Application of operations research techniques are also discussed in that volume by Mann as are the specialized sanitation problems of such a system by J. M. Powers.

Consumer Issues

The work done by Wolinsky *et al.*, Kroger *et al.*, and Renaghan and Bambic (as reported in Volume III) suggests that no objective issues arise for consumers if food service systems take account of the very real problems which holding food under various conditions can lead to. The work by Kroger *et al.* and Renaghan and Bambic, supports the notion that relatively high quality standards can be maintained in frozen prepared foods. The use of decentralized commissaries, as opposed to manufacturers preparing food for a national market is, however, suggested by the fact that the clientele of these programs will generally be eating several meals a week in the program, week after week. Under these conditions, food service operations have found that a very substantial menu variety is absolutely necessary--and such variety is not likely to be available at prices that will fit government cost parameters. Local commissaries will also offer the opportunity to prepare foods according to local tastes.

As Wolinsky _et al._ show, the entré course can be prepared centrally and held hot without a serious adverse effect on riboflavin, but a generalization that this is possible without destroying the thiamin content or seriously impairing it, waits further research. It is clear, however, that central preparation of vegetables presents serious consumer issues because of the loss of Vitamin C. Clearly centralized preparation does not do away with a strong consumerist bias against the decentralized reconstitution of foods.

As noted earlier, one of the major problems with large scale food service, assuming a centralized production strategy, will be the distribution of the food to the sites. In general, the planning of the overall system presents new kinds of problems. A very grave danger is that the management sophistication, both in government circles where civil servants ignorant of food service will be in charge, and within food service firms where food service operators ignorant of the techniques of operations research will be in charge, will not be brought to bear on the planning of food service systems. This concatenation of ignorances could lead to the continuation of the existing, basically irrational, production and distribution strategies. Sophisticated management techniques of the kind presented by Mann in Volume II could and should be used at the state or regional level to rationalize production and distribution to secure the maximum consumer benefit for the dollars invested by government and participant, alike, in these emerging food service systems. A continuation of the present administrative fragmentation of programs amounts to a tax on the consumers of these programs' services because the higher cost results in reduced benefits where program funds are limited, as they invariably are.

Implications for Curriculum Planning

In view of the economic pressures of increasingly expensive labor and scarcity of skilled labor; in view of the improving systems for commissary production; and in view of the emergent systems analytic techniques for planning such centralized food production systems, it is reasonable to assume that the need for traditional culinary and service skills will be dramatically reduced in this sector of food service. The key question addressing the food service industry should be of concern to every citizen (since the vast majority of us will be privileged to grow old and many of us will see our children fed a substantial proportion of their nutritional intake in these settings): Should public food service be a barracks trough or a social experience? To a significant degree, the answer will depend on the strategies adopted for preparing food service workers for work in these establishments, both in the school and, subsequently, in training programs in the place of employment.

As noted earlier, one major consideration in the Congregate Meals Program is socialization of the elderly. This suggests that appropriate interpersonal skills of the food service workers in these settings can be an important asset. Moreoever, since most of the work--if not all non-managerial work--will be unskilled, this large area of employment offers opportunities to the slower students often found in food service vocational programs. Such work as will be offered will probably lack any objective culinary skill base. As such, it can be looked on as demeaning, dead end work. But if, instead, such employment is seen as requiring interpersonal skills, then employees _can be prepared to render important and unique services to their clientele_. A dull, routine job could be made a rewarding service career--for few things are as rewarding as making others happy. There appears to be every reason to believe, too, that the real incomes these jobs provide can and will increase substantially because of the increasing shortage of workers in these areas interacts and because of social policies that continue to raise the relative floor under wages.

It is interesting to note that another rapidly growing program will be preschool food service. Here we find the employee interacting with the other end of the age cycle--and once again with a client to whom interpersonal skills can be important, though this is not now formally encompassed in a goal of the program. The significance of the life cycle considerations, further, suggests strong support for lodging the food service programs within the domain of Home Economics--a field uniquely attuned to such considerations, almost alone within the school system.

A second element of the knowledge base that is important to food service workers employed in the public sector will be nutrition. Clients of these programs now take 25 percent of their weekly nutritional intake from them. Knowledge of food handling techniques--such as the effect of protracted holding on vegetables--is an important consideration under these circumstances. Moreover, the worker should be able to encourage clients from knowledge to follow nutritionally sound patterns of eating rather than urge this course because "you're supposed to eat everything on your plate."

Centralized food service systems require substantially more careful procedures with regard to microbiological control. This transition from "sanitation" (wiping things up so they are clean to the naked eye) to microbiological control requires a developed knowledge base in a person who can consequently appreciate why a technician may collect samples from equipment surfaces with a swab for lab analysis.

As will be argued in a later chapter, food service workers will be better qualifed for their work if they are "trained" as change agents with respect to new foods and achieve a degree of sophistication regarding food processing. This is true because food cost pressures are liable to force government programs to use synthetic foods to a greater degree than the typical food service operation. Successful "change agents" can make this adjustment palatable--both figuratively and literally.

Finally, it should be noted that the skills of a cook, while not an absolutely essential entry level qualification in government food service of 1985, will continue to be useful. In this connection, however, preliminary results from a recent national survey of school food service managers are of interest. These managers were asked to list, in order of importance, their employees needs for further training. Interpersonal skills with other employees and clients was listed second (after management techniques) and nutrition was listed third. (8)

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VI

THE PESSIMISTIC FOOD SERVICE SCENARIOS

VI

THE PESSIMISTIC FOOD SERVICE SCENARIOS

In order to provide a reasonable lower bound for our projections, pessimistic scenarios have been prepared which explore unfavorable assumptions regarding both income and relative prices of food consumed away from home. It should be noted that the term "pessimistic," as used here, is a relative one. There is no intention to explore such catastrophic possibilities as a major depression, a major war, or some combination of civic strife and economic dislocation leading to paralysis of major urban cities. No case is made or implied that these are unlikely or impossible (or, for that matter, the reverse). Such an issue is simply beyond the scope of this study, just as foreseeing such events is beyond the relatively simple analysis possible within the manpower and time constraints of this project.

Explanation and the Scenarios

The pessimistic scenarios assume a relatively slower growth in income than the BLS Model, with negative differentials in growth of incomes of 10 percent and 20 percent being explored. Furthermore, with respect to each of these two assumptions regarding income, the possibility of a normal and abnormally unfavorable differential between food prices and the general level of prices is considered. Table 6.1 summarizes these assumptions. As that table makes clear, pessimistic scenarios 1 and 2 explore the possibility that income will grow 10 percent more slowly than the BLS Model Projections, while scenarios 3 and 4 assume a 20 percent slower growth. Scenarios 1 and 3 assume that prices of Food Away will grow 1.3 percent faster than the general price level, as they have, on the average, since 1960. Scenarios 2 and 4 assume an unfavorable price differential for Food Away of 2.5 percent which is the worst experienced in that period (with the single exception of 1973). As in the other scenarios, our purpose is not predictive--no particular pessimistic scenario is seen as particularly likely--but rather to determine the sensitivity of demand projections of the model to negative changes in the variables of income and relative cost.

Table 6.1

Pessimistic Scenarios
Summary of Assumptions

Pessimistic Scenario Number	Income Differential from BLS Model	Price Level Differential
1	-10%	+1.3%
2	-10	2.5
3	-20	+1.3
4	-20	2.5

Table 6.2 summarizes the impact of the two negative income assumptions on consumption expenditures. Since assumptions regarding Food Away prices have no impact on consumption expenditures in the model, only Scenarios 1 and 3 are presented. Table 6.2 shows that a 10 percent slower growth in income has a substantial impact on consumption. By 1985, total consumption expenditures would be nearly $73 billion less, a difference of 5.6 percent while a 20 percent slower growth results in a gap of over $141 billion, or 10.8 percent.

Table 6.2

Consumption Expenditures
Pessimistic Scenarios

1972 - 1985
(Constant Dollars - 000,000 omitted)

		Income Growth Assumptions	
Year	Standard World	10% more Slowly	20% more Slowly
1972	726,500	726,500	726,500
1973	759,919	756,577	753,235
1974	794,875	787,899	780,954
1975	831,440	820,518	809,693
1976	869,686	854,488	839,490
1977	909,691	889,864	870,383
1978	951,537	926,704	902,413
1979	995,308	965,069	935,622
1980	1,041,091	1,005,023	970,053
1981	1,088,981	1,046,631	1,005,750
1982	1,139,074	1,089,961	1,042,762
1983	1,191,471	1,135,085	1,081,136
1984	1,246,278	1,182,077	1,120,921
1985	1,303,606	1,231,014	1,162,170

Tables 6.3 and 6.4 show the impact of less rapid income growth--and more rapid price increases for Food Away than in the economy in general--on total sales of Food Away. Reduction of income growth by 10 percent results in a decrease in growth in demand for food service from the Standard World's 62.5 percent to a growth of 51 percent. The total dollar sales reduction is $4.5 billion, or 7 percent. On the other hand, changes from a normal price change differential of nearly twice the highest rate typically experienced results in a change in demand of $9.1 billion, or 15 percent. The cumulative effect in scenario 2, in contrast to SW, is to reduce industry growth rate to 28.8 percent to 1985 and to reduce the sales projected in 1985 by 13.6 billion or 20.1 percent from levels projected for SW.

Similarly in Table 6.3, the reduction in income growth by 20 percent has a substantial impact of over $8.8 billion, or 14 percent. The range of outcomes with respect to relative price change from normal 1.3 percent to 2.5 percent is $9.1 billion, or 16 percent less than in the assumption of decreased income but SW performance (1.3 percent) regarding price. This most pessimistic scenario yields a growth rate for sales of Food Away of only 18.1 percent. The projected level of 1985 sales of Food Away of 47.7 billion is $17.9 billion, or 27 percent, lower than the SW projection.

Table 6.3

Projected Sales of Food Away From Home Pessimistic Scenarios: Income Growth 10% Less Than Standard World

1972 - 1985
(Constant Dollars - 000 omitted)

		Price Differential Assumptions	
Year	Standard World	+1.3%	2.5%
1972	40,385,920	40,385,920	40,385,920
1973	42,023,450	41,725,070	41,014,100
1974	43,658,750	43,073,630	41,701,910
1975	45,314,430	44,445,340	42,440,830
1976	47,007,970	45,850,980	43,225,120
1977	48,752,770	47,298,710	44,050,570
1978	50,560,060	48,795,550	44,914,760
1979	52,438,470	50,346,680	45,815,410
1980	54,395,630	51,956,960	46,751,560
1981	56,439,560	53,631,770	47,723,890
1982	58,577,470	55,375,740	48,733,050
1983	60,817,620	57,195,000	49,782,150
1984	63,167,630	59,095,010	50,873,920
1985	65,635,540	61,081,420	52,011,850

Table 6.4

Projected Sales of Food Away From Home Pessimistic Scenarios: Income Growth 20% Less Than Standard World

1972 - 1985
(Constant Dollars - 000 omitted)

		Price Differential Assumptions	
Year	Standard World	+1.3%	2.5%
1972	40,385,920	40,385,920	40,385,920
1973	42,023,450	41,426,710	40,715,730
1974	43,658,750	42,491,260	41,119,530
1975	45,314,430	43,584,480	41,579,970
1976	47,007,970	44,710,520	42,084,660
1977	48,752,770	45,872,410	42,624,280
1978	50,560,060	47,073,250	43,192,450
1979	52,438,470	48,314,850	43,783,590
1980	54,395,630	49,599,670	44,394,270
1981	56,439,560	50,930,690	45,022,810
1982	58,577,470	52,310,590	45,667,900
1983	60,817,620	53,743,590	46,330,750
1984	63,167,630	55,233,070	47,011,980
1985	65,635,540	56,783,170	47,713,590

The caution introduced in considering the high cost scenario is appropriate again here. The model reflects historical relationships between income and demand for foods and services in various sectors, but it was not constructed primarily to reflect price elasticity of demand.

These results are paralleled in work force demand. Tables 6.5 and 6.6 show that a 10 percent reduction in income growth results in a reduction in the growth of from 62.4 percent in SW to 51.2 percent while a 20 percent reduction in income growth is projected to reduce that growth to 40.5 percent. A 10 percent reduction in income combined with a higher, 2.5 percent, cost increase differential reduces food service work force growth to 28.7 percent. The most pessimistic assumption--a 20 percent decrease in income growth combined with a rapid rise in the relative price level of food service--sees work force growth at only 18 percent.

Implications for Curriculum Planners

It is interesting to note that only the most pessimistic assumption reduces food service employment demand below the level of projected work force growth of 22 percent. Under all but the most pessimistic assumptions, then, the demand for food service workers appears to be relatively healthy, once again reinforcing the notion of a fairly secure field of employment.

Table 6.5

Projected Total Food Service Workers
Pessimistic Scenarios: Income Growth 10% Less Than Standard World

1972 - 1985

		Price Differential Assumptions	
Year	Standard World	+1.3%	2.5%
1972	4,014,489	4,014,489	4,014,489
1973	4,171,712	4,142,092	4,071,513
1974	4,335,594	4,277,487	4,141,267
1975	4,502,498	4,416,145	4,216,974
1976	4,674,764	4,559,706	4,298,574
1977	4,852,332	4,707,611	4,384,325
1978	5,035,932	4,860,182	4,473,643
1979	5,225,903	5,017,440	4,565,863
1980	5,422,678	5,179,568	4,660,643
1981	5,626,598	5,346,683	4,757,711
1982	5,838,011	5,518,918	4,856,886
1983	6,067,251	5,696,450	4,958,153
1984	6,284,649	5,879,457	5,061,528
1985	6,520,634	6,068,107	5,167,095

Table 6.6

Projected Total Food Service Workers
Pessimistic Scenarios: Income Growth 20% Less Than Standard World

1972 - 1985

		Price Differential Assumptions	
Year	Standard World	+1.3%	2.5%
1972	4,014,489	4,014,489	4,014,489
1973	4,171,712	4,112,473	4,041,894
1974	4,335,594	4,219,654	4,083,434
1975	4,502,498	4,330,608	4,131,438
1976	4,674,764	4,446,291	4,185,160
1977	4,852,332	4,565,651	4,242,367
1978	5,035,932	4,688,635	4,302,097
1979	5,225,903	4,814,952	4,363,377
1980	5,422,678	4,944,570	4,425,646
1981	5,626,598	5,077,405	4,488,434
1982	5,838,011	5,213,435	4,551,404
1983	6,057,251	5,352,699	4,614,403
1984	6,284,649	5,495,226	4,677,297
1985	6,520,634	5,641,099	4,740,085

VII

THE FOODS WE WILL EAT

VII

THE FOODS WE WILL EAT*

Introduction

The pattern of food consumption in America has been based almost exclusively on an abundant supply of food and, indeed, the problem of American agriculture in the past fifty years has been seen as that of an over-supply disrupting agricultural markets. Food has been plentiful and relatively inexpensive and the dietary habits of Americans have been formed by these supply conditions. Worldwide demographic and economic forces are now, however, moving us into a time of relatively greater scarcity of food. But fortunately they are moving us also toward a fast developing technology in the area of food science, and they are providing us with the means of adapting less expensive food supply sources to the tastes we have formed.

Since the economics and demographics of the situation seem to point to an inexorably rising cost for animal protein, the means of adopting and adapting to new foods may be thought of as facilitating a necessary process in making what is inevitable also relatively more acceptable. (This is not only a technological problem but a cultural one, as well.)

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*This chapter was jointly authored by Leo M. Renaghan, M.B.S; Josephine Marie Powers, B.A.; and Thomas F. Powers, Ph.D., all of the Pennsylvania State University's Food Service and Housing Administration Program.

The Economics of Protein Supply

While there is a range of opinion regarding the future of food supply from pessimistic (6) to optimistic (3) there is virtually unanimous agreement that growing demand in developing countries based on population growth, in relatively more developed countries, arising from rising per capita income will result in substantial and continued upward pressure on food prices in the coming decade (1).

> Per capita grain requirements range from 180 K/year in low income countries where it is directly consumed by humans to approximately 900 K/year in North America where it is mostly fed to livestock. The World's population growth of approximately 2% a year is being rapidly out-paced by the growth of real income which now averages 3% to 4% per year. In many countries such as Korea, Taiwan, Japan, the crown colonies, France and others, real income per capita has been increasing at 5-1/2% per year. This means that large portions of these populations are entering an income level where they demand more meat, milk, and eggs along with their rice, bread, and potatoes, and they have the money to pay for it. (9)

While more recent articles express a greater tone of optimism resulting from what appears to be good crop conditions in 1975, "over the long haul, record harvests alone will not be enough (to meet growing needs): Agricultural production needs a quantium jump" (1).

Difficult temporary conditions like bad weather, short crops, or poor fishing have occurred in the past, but the rapidly growing demand in recent years for food and feed based on rising income and growing population are relatively new. On the supply side there are also new developments suggesting that we have reached the outer limits of natural productive capacity for known foods. First of all, it appears that the seafood catch of conventional fish has reached its upper limit. Secondly, the reserve acres held out of production are now almost all back in production and do not constitute a source of expanded food supply. Thirdly, the long-standing grain surpluses have been reduced to the equivalent of about one month's world utilization.

In order to understand the pressure that the multiple effects of higher grain prices have on the price of animal protein, examine Tables 7.1 and 7.2. Table 7.1 shows the protein conversion rate ranging from a high of 33 percent to a low of just over 7 percent for various animal proteins. What this means is that with young cattle, for instance, every 100 pounds of vegetable protein fed will result in 10.3 pounds of animal food.

Table 7.2 provides another means of viewing relative efficiency: Here the amount of land needed to produce 1000 Kgs. of protein in one year is summarized. It will be noted that beans and cereal are from 3 to 5 times more productive than such food animals as beef, hogs, and sheep. While poultry and milk cows are somewaht more efficient, it

Table 7.1

Relative Efficiency of Protein Converters

	Protein Conversion Role
Calves--being fattened	32.9%
Milk	30.2
Broilers	30.0
Hogs	23.5
Eggs	20.4
Fryers	19.1
Calves--normally fed	18.6
Baby Beef	15.6
Young Cattle	10.3
Sheep	7.4

Note: Many feeds such as urea and range land grass do not subtract from the human food supply.

Source: Borgstrom, Principles of Food Science, Vol. II

Table 7.2

Land Needed to Produce 1000 Kg. of Protein in One Year

Protein Source	Hectacres Required
Beef	30 - 50
Hogs	40
Sheep	25 - 40
Poultry	25 - 30
Milk Cows	20
Grass	10
Cereals	8
Beans	8.2
Potatoes	4.5

Source: Borgstrom, Principles of Food Science, Vol. II is a source protein in terms of land utilization. One caution, expressed here, will have significance later in this discussion: Much of the land on which animals graze cannot be used for any other agricultural purpose. Thus, what appears likely is that fattened animals will become relatively more expensive and relatively scarcer. An increasingly determining parameter of the supply of such animals will be the availability of range land.

Frozen Prepared Foods

There is quite a different kind of development in the food service system: it is the increasing use of frozen prepared food. Here the product being offered is not so much a new product as a new way of preparing a traditional product. This development results from the economies available in preparing foods in large quantities, centrally. To date, the principle sources of central production have had to operate in a very large--generally national--market. The quality and variety of foods available from national organizations has been criticized by operators. The technology now entering the United States market from Europe for centralized food production on an intermediate scale in commissaries may provide a significant impetus toward centralization of production. (A good portion of Volume II addresses itself to this issue.) There is, however, considerable resistance among consumers to the remote preparation of foods. Perhaps this resistance is best typified by proposals for "Truth in Dining" legislation.

Adapting to New Food Supply Conditions

A number of developments ranging from "doing what we've always done" a little more efficiently to the introduction of entirely new (to the consumer) food sources are likely to occur in response to the increasing costs of protein in the next 10 to 15 years.

Fuller Utiliziation. First of all, we can expect to see better use of the existing food supply through mechanical deboning processes applied to carcasses after they have been stripped of the meat we are accustomed to choosing. Thus "shaped" cutlets made from scraps which would previously have been thrown out are now available in such varied products as veal, steak, and chicken products, including frankfurters made with chicken. We can also expect to see better use of vegetable trimmings made possible with new processing techniques. Since these trimmings are presently thought of as by-products, they present labeling and consumer acceptance problems. But the products, themselves, are reported to be of generally high quality.

Use of Range Land. As the cost of grain for cattle rises, there will be a substantial increase in the cost of feed lot fattened beef. As this cost becomes higher and higher, it can be expected that this source of supply will be less attractive to consumers because of price considerations.

The attempt on the part of the Department of Agriculture to change the grading standards is in large part a response to this kind of need. (9) While the current attempts of the U.S.D.A. to change grading standards are being held up in the courts, it appears virtually certain that by 1985 Americans will find that some familiar meats have become an expensive and perhaps fairly rare luxury.

Enrichment. Another development we can anticipate is the enriching of food. It seems quite likely that this will come about in large part in response to nutritional labeling. It seems virtually certain that nutritional labeling will be a fact of life for foods in general by 1985 (24, 16). As consumers come to look at nutritional labeling on products such as soft drinks and bakery products, it is anticipated that notice of "0% protein," "0% vitamin D," and 0% niacin" are likely to place some products in a relatively bad light. Moreover, some products, especially soft drinks, are thought to have reached a sales plateau and may be able to obtain some further market penetration by protein enrichment and the accompanying nutrition claims.

The second reason for enrichment is as a solution to the restricted tastes of target populations, particularly children who will eat pizza and cake, for instance, altogether too cheerfully. Thus, products in use in school lunch will probably incorporate enriching elements. This prospect presents two somewhat different kinds of issues. On the one hand, by enriching a popular product, like pizza in the school lunch program or a sweet roll or doughnut in the school breakfast program, the student is induced to eat a nutritious meal. On the other hand, problems are presented by the fact that the student may come to think of doughnuts or cake as intrinsically nourishing foods when in fact they are nutritious only when so fortified.

Plant Genetics. New plant genetics developments like Triticale offer a substnatial potential for food enrichment. Triticale is a man-made cereal created by crossing wheat and rye grains. A specialty bread produced from this flour called Tritibread supplies 12 percent of the U.S.R.D.A. for protein, 30 percent of the thiamine, and 10 percent of the riboflavin, niacin, and iron in only two slices of bread, weighing approximately two ounces. Moreover, in the bread tested, Triticale was used as a partial replacement for white flour. (18)

The possibility emerges that new eating habits will develop because, with enrichment, foods become nutritionally acceptable. That is, as enriched products, foods which are presently not nutritious in the unenriched state, come onto the market as both nutritious and low-cost foods.

New Foods

To this point in the discussion, we have focused on the reshaping of foods that have been a part of our culture for some time, but assume a slightly different though readily recognizable form. Another more radical adaptation to the economic and demographic forces working on scarce food supplies is the development of entirely new foods. By 1985 three basic but somewhat unfamiliar food product development areas will undoubtedly be at the center of much more widely accepted new food products.

Soy Protein. First of all, the major source of protein other than animals will almost certainly be soybean based. Soybean protein products have been available for some time, and their principal technological building problems have been solved. Moreover, soy protein has now found substantial acceptance in the market place. Thus it is no longer a purely experimental product but is one which has demonstrated economic viability. Soy has been found to have functional advantages already in a number of products--such as bleaching flour, providing volume increase in bread-making and as the protein in infant formulas designed for children allergic to animal protein. While its use is still relatively limited, we can expect that by 1985 substantial new product uses will have been developed.

Hydrocolloids. The second major factor interacting in the development of these new foods are the hydrocolloids. Most of these products, in the form of starches, gum arabic, and pectin, have been around for a long time. (But, the variety of products available for use in the home is substantially less than what is available to manufacturers.) Hydrocolloids are derived from natural foods like plant exodates (sap), plant flower, plant extracts (pectins), seaweed extracts (alganates) and animal extracts; there are also a few synthetic hydrocolloids. While only a small proportion of the new food products will be made up of hydrocolloids, they are a crucial element already being used by manufacturers to supply appearance (an opacity or clarifying agent), flavor, and texture, as well as such manufacturing considerations as batter adhesion, jelling, and emulsifying.

Flavor Chemistry. The third crucial element in the development of new foods is flavor chemistry, a field which has grown radically in recent years. The work of the flavor chemist is to extract all the chemical elements in the flavor of a specific food, which may run as high as 300 to 400 compounds. It is not economically feasible to put back into an artificial flavor all of these compounds, so, by a process of taste testing, a few key chemical compounds, are identified and replaced in the product in order to synthesize the flavor. Flavor chemistry has grown so fast in the past ten years that it is becoming possible to make many synthetic foods which were impossible to make ten years ago. Consider the development of margarine. It was first a low-cost substitute for butter, but it has gradually become a product that increasingly displaces butter from the market as a matter of consumer preference. And the flavor of margarine has become closer and closer to natural butter as flavor chemistry has progressed. Food manufacturers have discovered that consumers have become so accustomed to mass produced, artifically flavored foods that sometimes real, natural flavors are found to be objectionable. Flavor designers, in consequence of this, often move away from a fresh flavor bias. Thus, for instance, strawberry ice cream flavor, with natural strawberry flavor, is now said to be unacceptable to consumers who prefer the artificial strawberry flavor which they've grown accustomed to (5). While flavor designers can enhance preferred fresh flavors to intensify the natural flavor, it is clear that flavor preferences are a cultural artifact.

It is the interaction of these three subsets of food technology, that is soy protein products, hydrocolloids, and flavor chemistry, which will bring us many "new foods." It should be noted, too, that the technology to develop proteins from single cell bacteria has brought some new products onto the market recently, and so by 1985, this may also prove to be a significant source of protein.

The most likely use of foods resulting from these technological developments will be protein products used as extenders and enrichment additives and as analogs or "imitation" meats. New foods of the analog variety presently being tested include an imitation bacon, and sausage links and patties, made wholly from soy products without any meat whatsoever.

It is anticipated that soy protein will gradually replace sodium caseinate as the base for imitation berry products. Sodium caseinate is an industrial chemical which, however, is derived from skim milk. It is expected that the increasing volume of soy products and the rising cost of milk products will permit sodium caseinate to be replaced by soy. Similarly, imitation ice cream and desserts of all kinds are likely to become available commercially by 1985. As noted elsewhere, soft drinks and baked goods are also likely to be enriched by soy products. A soy-based cheese has already been developed and is in use in making an enriched pizza product for school lunch use.

Frozen Prepared Food

McNeill (19) has reviewed developments in the technology of frozen food and gives a picture of a technology that has solved all the basic technical and economic problems and is moving into a high growth period. Such processes as cryogenic freezing, which were thought of as technically but not economically possible as little as ten years ago have now come into relatively high volume use, although they are still expensive. Volume II of this report discusses in some detail new equipment systems coming into use in the United States that will encourage the development of commissaries to replace to some degree large frozen food factories as the major source of frozen prepared foods.

Another form of remotely prepared foods is the chilled food system the Army has pioneered (23). Chilled foods prepared in a central commissary and held for up to 72 hours are reported to experience no statistically significant difference in organoleptic evaluation. Chilled, centralized food production facilities using a chilled system have been in use for five years in the Schuler Restaurant Company and are reported to have met with great success in a restaurant chain which presents a distinctly luxurious image and has a high degree of acceptance in a relatively high-priced, competitive food service market.

The problem with frozen prepared foods and other remotely prepared foods seems, to a significant degree, to lie with the service employees who handle these foods. Some operators report that servers will "warn guests away" from frozen products. As will be noted in the curriculum planning area of this chapter, development in servers of an appreciation of the fact that food can be prepared remotely at lower costs and without significant sacrifice of quality would appear to be an important step in gaining acceptance for remote food preparation.

Cultural Implications of New Food Development

As the preceding discussion shows, certain economic and demographic forces are very likely to put continuing upward pressure on the price of animal protein. The technology is at hand to respond to that set of challenges by making more efficient use of existing food products, adapting traditional food products through the use of new ingredients, as with the "chicken hot dogs," as well as by increasing the use of entirely new foods. Similarly, in the restaurant market place, the problems of labor cost and supply can be met by freezing and chilling technologies delivering products that are more than adequately acceptable. The work reported on in Volume III of the present report by Kroger et al., and by Renaghan and Bambic lends strong support to the notion that very high quality tolerances can be met with frozen foods, even under difficult production circumstances.

The conclusion one might expect is that since there is a problem and the technical solution is readily in hand, we can expect that problem and solution will be quickly joined by rational consumers. Unfortunately, this relatively optimistic picutre may not be warranted. As one writer has put it,

> Rising meat prices and meat shortages have led to considerable talk about gradually moving the human diet away from livestock and poultry products as a whole and using our global land resources for more esthetic purposes. The evidence of the ages is that nothing of the sort will happen. The races of man who have survived on this planet for more than a million years as hunters and fishermen will not be cajoled into giving up their taste for meat, fish, poultry, eggs, and milk. On the contrary, human preference for these foods will continue to be in the dominant factor in the food markets of the world for many years to come. (9)

Clearly, human tastes in food are a cultural phenomenon. Food habits and preferences are not inherent in the individual nor are they passed on from generation to generation like hereditary characteristics. Food preferences are learned behaviors, which begin at birth and continue into adulthood. Keesing, attempting in Cultural Anthropology to explain why people change dramatically in some respects and remain remarkably unchanged in others formulated a hierarchy of areas of a culture that were likely to be particularly stable and persistent--"or, if they are disturbed voluntarily or by force . . . to involve most serious stress and disorganization." The first area was "essentials of early constitutional conditioning (fundamental body training habits such as digesting, evacuating, sleeping . . ." (14) We see that eating is one of the areas most impervious to change and can cause stress and disorganization when change is forced. This is important for it helps us to explain the resistance to change and why new foods have difficulty in being accepted. That which is learned over a long period of life and is reinforced by daily experience is difficult to change. Kurt Lewin explains cultural food habits with the phrase, "We like what we eat rather than eat what we like" (17)--that is to say, we learn to like what is available from our environment.

Some examples of resistance to change in food habits may be helpful. A new food product which is available in relative plentitude is krill, a shrimp-like creature found in the Antarctic Ocean. Both the Russians and Japanese have experimented with krill and the Russians, in their marketing attempts, have tried to imbue it with all sorts of nutritional and medicinal benefits to increase acceptance. Thus far, however, the product has not been accepted. The Japanese have held off introducing krill because "they are devoted to the common decopod shrimp, _and the odor and taste of a krill are apparently different from and not better than those of the common shrimp."_ (12)

A classic example of resistance to new varieties of food is reported by Apodaca. (2) Spanish American farmers in New Mexico have grown corn for many years as an important crop. Their yields were very low and the quality poor by any ordinary standards. A hybrid corn was introduced, in one community, which gave three times the yield of that grown traditionally. Once these results were seen, a majority of growers adopted this hybrid variety. Within four years, however, nearly all farmers had ceased to plant the hybrid and were using the old corn. Inquiry into why these farmers had turned their back on the potential economic gain of a three-fold increase in yield showed that the principal determinant in this decision was the unwillingness of the farmers' wives to accept this product for use in their foods. "Some did not like its texture; it did not hang together well for tortillas; the tortillas were not the color of nixtamal (the corn flour dough to which they were accustomed). Few had cared for its flavor." Among a group of low income, marginal farmers, food preferences overcame the inducement of substantial economic advantage to discourage the introduction of a new product.

Mullet is a fish traditionally eaten only by Blacks in Florida and Georgia. Several attempts have been made by the National Marine Fishery Service and trade groups to introduce mullet into wider markets both in the Atlanta and Baltimore regions. Substantial sums of money have been spent on publicity and product development by both government and industry. The product was judged by taste panels to be at least as good and perhaps superior to a number of other similar fish products in the market and offered consumers a substantial price advantage. Unfortunately, the product was not recognized by any consumers except Black migrants and the product never attained success. Those who were close to this development report the opinion that consumers were simply not ready to accept a "strange" product (21).

It seems reasonable that one problem to be solved by both food science and the food service delivery system is a successful introduction of innovations in foods both in the form of new foods and of new food processing and preparation techniques such as frozen prepared or chilled food, remotely prepared. The successful introduction of these innovations would offer advantages to nearly everyone. Food service operators would be able to adopt lower cost strategies, holding their prices down and thereby increasing volume of sales and profits. Consumers in either commercial settings or in government subsidized settings would receive a greater benefit at a lower cost, if they could be persuaded to adopt the new foods and new food delivery systems. The crucial element, however, is securing adoption of these new foods and innovative food delivery systems in the face of very strong evidence that serious resistance is likely. The importance of the work presented by Renaghan in Volume III of this report is that it suggests a generalized strategy likely to move us toward this beneficial result.

An Adoption Model for New Foods

Renaghan's study notes that the concern in market research has been to predict who will be the innovator for food products or new products in general. In the past we have focused on demographic factors and found highly contradictory results in the studies available. Similar studies looking at personality characteristics have had the same effect.

In his study for this Project, Renaghan examines the way people perceive the physical product along five dimensions. In addition, he attempts to relate the way in which these dimensions affect the willingness of an individual to become a food product innovator. The five dimensions were originally postulated by Everett Rogers, but very little empirical research has been done to test the Rogers hypothesis. Renaghan focuses on five perceptual characteristics postulated by Rogers in the products instead of on the characteristics of the consumers. These five factors are

1. Relative Advantage. The degree to which an innovation is superior to the ideas it supplants--in economic and non-economic terms.
2. Compatability. The degree to which an innovation is consistent with the existing values and past experiences of the adopter.
3. Complexity. The degree to which an innovation is difficult to understand and/or use--thus the amount of learning involved in understanding the product and how it is used.
4. Divisibility. The degree to which an innovation may be tried on a limited basis without a large commitment on the part of the individual.
5. Communicability. The degree to which a product can be and is talked about in a social setting.

This study clearly supports the hypothesis that the individual's perception of the product is strongly related to the consumer's willingness to become an innovator with that product.

Menu-Planning Issues

As has been suggested earlier there are substantial economic advantages to food service operators in achieving acceptance of new products and new techniques for developing conventional products. In the private enterprise, restaurant sector of the market, however, price is likely to play an important--indeed, a leading--role in the gradual acceptance of new products. U.S. Prime beef is an interesting example of the kind of development likely to occur. For some years, the cost of prime beef rose out of proportion to the cost of meat generally. At first the product move toward U.S. Choice in the best restaurants, who were naturally motivated by a price consideration. But gradually prime beef came to be unacceptable to many diners because it was gradually perceived to be too fatty. Thus economic forces appear to have lead to a shift that was subsequently reinforced by a change in tastes. There are substantial advantages to operators in gaining acceptance for newer products which have lesser delivered costs. These lower costs permit lower prices, which in turn may encourage a higher volume and a higher profit. There do not appear to be any overwhelming social issues involved here. As price changes come into play on the market-place consumers will be able to follow that old rule, "You pays your money and you takes your choice." It is true that a social issue exists in the sense that lower prices for acceptable food do constitute a social benefit for consumers.

While social issues are perhaps secondary in the case of the commercial restaurant industry with respect to new foods, government food service programs present a different picture. As noted in Chapter V of this report, these programs are expected to grow nearly twice as fast as the market for food away from home in the next ten years. New foods, in government programs, raise problems in quite a different context than in commercial operations. By and large, new food products will be introduced here inexoribly, as rising prices exert pressure to move in the direction of more economical foods. Under these circumstances, clients of these programs may find themselves confronted with the choice of not eating, or eating only a portion of the meal served them, or accepting new food products.

There are clearly important consumer issues at work in the market for public food service which offer significant potential concerns. Viewing new products in these settings in the light of Renaghan's Adoption Model, new guidelines for menu planning in these settings may be suggested. (Much the same guidelines would seem to apply in the commercial restaurant sector):

1. Introduction of new products should offer and emphasize the relative advantage to the consumer. One possible menu strategy would be to offer new products in their introductory stage on a menu as an alternate to a relatively unpopular product or a product which is very frequently served, thus permitting the consumer to perceive a relative advantage in trying the new product.

2. New products should be--as they generally are now--introduced in forms which maximize their compatibility with existing foods. To put it another way, the benefit to emphasizing the newness in new foods is not universal and in many instances is actually detrimental to the consumer's acceptance of the product.
3. Just as new foods would be presented as highly compatible with old foods, so menu planning should minimize the complexity of the product from the consumer's viewpoint. This is done by minimizing the amount of learning involved, by maximizing the product's compatibility, or by simplifying the consumer's behavior in choosing it.
4. Where products are thought to be acceptable from a point of view of taste, though they are new, strategy of divisibility seems appropriate. Here, the innovation to be tried is presented on a limited basis--perhpas as an alternate extra course or as a snack permitting clients to taste the food without having to "hazard" the success of the whole meal on the food.
5. The role of the food service worker in congregate feeding and other public food service establishments is perhaps strongest on the issue of the communicability of the new product. As will be suggested in the section on curriculum planning, success in educating students about the acceptability of new foods and encouraging them to adopt "high trier roles" could have a substantial impact on our ability to communicate to potential users about the acceptability of the new product.

Renaghan's proposed strategy is related to the marketing literature on new products in general and at the same time has empirical support in experiments conducted under this project. It seems reasonably likely to provide help in developing a valid strategic basis for planning the introduction of new products at the consumer level. The ability to introduce new products at the consumer level offers substantial benefits not only to food service operators in the commercial sector but social benefits to consumers in all areas and particularly in "captive" settings which appear potentially to be of increasing proportionate significance in the food service industry of the future.

Frozen Prepared Foods

Substantially the same kinds of strategies are suggested for securing the favorable introduction of remotely prepared foods in the commercial sector. That is, emphasis on the relative advantage (probably, price arising from cost advantages); maximizing their compatibility by emphasizing formulas such as "prepared by our own recipe"; and, minimizing their complexity--a process which will be facilitated by educating food service workers to accept this kind of product themselves and to communicate favorable views of it.

Consumer Issues

Three kinds of consumer issues are presented by new foods: relative cost, the nutritional benefit to be derived from formulated vegetable protein meat extenders and analogs, and labeling issues.

Relative Cost. As suggested above, the positive side of the consumer issue is that, in reasonably conceived menu planning, the larger amount of protein benefit can be gained by consumers for a relatively lower cost. As noted, this is a less significant factor in free choice settings like the commercial restaurant industry, but it is of greater significance in "captive" settings. Unwillingness of agencies responsible for feeding large numbers of people to seek acceptance for these less expensive products in an appropriate menu should be subject to criticism from consumers as severe as the criticism would be of any other step that raises the relative cost of the meal in chronically underfunded programs, reducing the total benefit to be provided from the funds available.

Protein Analogs and Nutritional Benefits. Soy products are not used alone but in combination with other ingredients and, hence, the key is the nutritional value of the end product. Soy protein is limiting in methionine (13) and that essential amino acid must be added back either through the direct addition of 1-1/2 percent of methionine or by combining the soy with a cereal or an animal source of methionine. (20) Some flavor problems are presented by adding back methionine in mildly flavored foods (11), and so the best strategy is to use the product in combination with a cereal or animal source of methionine (20). While soy products are a good source of protein, it should be remembered that they are not a particularly good source of vitamins or minerals; therefore, there is a need to use them in combination with other foods to supply those nutrients. The need to use them in combination with other foods is reinforced by the requirement to supply these other nutrients as well as the methionine needed in food formulation. For example, soy proteins can be formulated with cereal alone and provide a sole protein source for growing infants and children at a minimal cost (11). Similarly, soy protein can be formulated into a low cholesterol, poly-unsaturated fat food and in slimming food formulations. Thus, these products may offer certain kinds of nutritional advantages over traditional foods without regard to economic advantage. While more research is clearly desirable on the extensive use of soy protein in our diets, the information available from present research strongly supports the conclusion that soy protein products are safe for human consumption (22).

Labeling. There can be no question but that the consumer is entitled to know what a food is. On the other hand, the labeling requirements with which we live today seem to be largely the result of consumer movements of the period around 1920 when adulterated and unsafe food was a common problem in the United States. Today these requirements insist that products be labeled "imitation" when in fact the product may be from every standpoint superior. Thus, for instance, labeling requirements for "chicken frankfurters" are thought by some to limit consumer acceptance and yet from the standpoint of organoleptic evaluation or nutritional content, there can be no question but that frankfurters made with chicken are at least as good as high quality, competitive products. Labeling requirements that protect consumers are desirable. Labeling requirements that inhibit rational adaptation to changing food supply conditions without conferring any substantive benefit at all on consumers appear to be anachronistic.

Food marketers appear to have increasingly focused on presenting the new product as good in its own right. Thus Morning Star, a new brand of non-meat sausage emphasizes the fact that it is a vegetable product that contains no cholesterol. In the short run, there are reports of resistance to this product, but in the long run, it is to be hoped that consumers will become more "sophisticated" in their assessment of these new products as they become more and more common because of price pressure. The 1974 run-up in the cost of beef brought soybean extenders mixed with hamburger into the grocery store for the first time. Similar developments ought not to be inhibited by regulatory practice, though it is appropriate to continue to offer consumers full information.

Truth in Dining

There have been numerous reports in the trade press--all of them aghast at the possibility--of laws being introduced to require the identification of frozen prepared food or other remotely prepared food on menus in restaurants. There can be no question that there would be a significant initial disruption in the marketplace from such a development. On the other hand, the universally gloomy view of the prospect underestimates the ingenuity of the food service operator and the food manufacturer as marketers. Should such legislation become fact, a positive approach to gaining consumer acceptance can be envisioned. Such an approach would rely, as suggested in Chapter IV, on an increasing emphasis on ambience and quality of service to differentiate one restaurant from another, and it might actually go so far as to indicate the manufacturer's brand name on a menu to assure the consumer of the quality of his food. Restaurants under this set of circumstances would emphasize the entertainment content of their establishment much more heavily than the food, and in the presentation of their food, they might emphasize the security that goes with a known brand name, much as is done today in a grocery store. An alternate strategy would be to present food prepared in a remote site under the restaurant's own brand name--" . . . and prepared by our own special recipe under Chef Pierre in our own central kitchens."

An absolutely essential element of such a marketing strategy--and it may some day be an industry-wide necessity to embark on such a marketing strategy--would be training food servers to understand that, except in the relatively rare gourmet house, food that is prepared centrally can be good food. Once again, the success of the Schuler organization in Michigan comes to mind. While presented as a luxury dining spot, the Win Schuler Restaurants are an institution in central Michigan and have wide acceptance in a highly competitive, high-priced market. Schuler's success clearly indicates the possibility of very high quality tolerances in very fine foods being followed successfully and presented to consumers. The success of this organization, as well as the work reported on by Kroger et al., and Renaghan and Bambic in Volume III all suggest that once every restaurant is required to "tell the facts," truth in dining may prove to be the biggest food service non-issue of recent years.

Issues for Curriculum Planning

As remotely prepared food becomes increasingly common in commercial restaurants, acceptance by those who will be serving it becomes crucially important. Moreover, as both centrally prepared foods and "new foods" become increasingly common in government feeding programs where the client has relatively little choice, substantial social benefit will be gained for our society if food service workers can facilitate the process of gaining acceptance for food by emphasizing their relative advantage and compatability, by minimizing their complexity, and by heightening the communicability of the product. Substantially the same argument applies in either the public or the private sector, but in the private sector social benefits as well as private economic benefits will accrue.

Very clearly, the food service worker will be better prepared if he or she is knowledgeable about the current state of technology--not in a highly technical sense but in terms of being well informed on "current events" in the food service industry. What is indicated is the preparation of students who are sophisticated about foods. A "high trier" attitude toward new foods would be advantageous, functionally, to inculcate in food service students.

Clearly, too, the probability that many food service students will ultimately become food service managers in such settings as nursing homes, congregate feeding centers, and school lunch programs ought not be overlooked. While many of these programs are formally regulated by government agencies, the food service manager or, indeed, even a food service shift supervisor, who is ignorant of the nutritional advantages and disadvantages of new foods or the nutritional impact of food reconstitution strategies could do damage to consumers of the product. Since these consumers gain a minimum of 25 percent of their nutritional intake in these settings, protracted "malpractice" could readily result in serious harm--a fact which must not be overlooked in emphasizing the significance of a nutritional as well as a "current event" understanding of new foods.

Substantially the same arguments apply to frozen prepared foods, but an additional one is also in effect. The problems of micro-biological control and sanitation are substantilly more significant in frozen prepared products than in products prepared on premise. It is important, therefore, in an emerging age of remote preparation of foods, to supply the future food service worker with more than a surface knowledge on which to base a prejudice for "oversanitation" as it might be thought of in the traditional restaurant. As a bare minimum, as noted earlier, the food service worker should be intellectually equipped to understand why it is that sanitation practices go beyond "looking to see" if the kitchen is clean and extend to collecting samples from work surfaces with a swab for laboratory analysis.

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VIII

THE RESTAURANT SERVICE SCENARIO

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THE RESTAURANT SERVICE SCENARIO

Introduction

The study of restaurant service is interesting from a number of points of view. First of all, in Chapter 4 we saw movement from the traditional format, dating from an earlier time, to the development of more informal and productive settings. It appears that the behaviors grouped under the term "service" are evolving and will continue to do so. This is true, if for no other reason, than because of economic and social forces. The relatively low level of productivity of the traditional server is rapidly giving way to varying amounts of self-service contents. Many operators report it difficult to attract the qualified person into the waiter and waitress role. This may be due at least in part, to social resistance to the "servant" role. It is the very scarcity of servers as much as their cost which, in many cases, has led operators to adopt self-service; they simply can not attract a sufficient number of servers to cover a dining room in the traditional format.

Beyond the intrinsic interest in studying a social institution like a restaurant in the throes of change, consideration of this subject in a study dealing with the restaurant of the future is essential because, from the guest's point of view, the server is the restaurant. Assuming adequate or better food and a reasonably clean appearance, the server becomes the personalization of the restaurant and the server's role is crucial to the shaping the dining experience.

Elsewhere (See Chapter 4 and most of Volume II) we have argued that labor costs and the scarcity of skilled labor are likely to speed the trend toward a de-emphasis of culinary skill. In fast food operations--and fast food format beef and beer service restaurants--this has been accomplished already by menu simplification. Increasingly, the use of commissary prepared foods by chains and factory prepared foods by chains and independents will make a similar de-emphasis of culinary skill possible in restaurants with more extensive variety. Inevitably, as our restaurants' foods become more alike, the focus of competition will shift to such other areas as price, atmosphere, and service. In a highly competitive market, price competition is likely to be met and so one of the major bases for differentiating one establishment from another in large parts of the industry will be the service offered. Thus service appears to offer a crucial element in the restaurant marketing mix.

While servers by no means are America's wealthiest citizens, a server who ranked in the top income group for servers in 1971 earned in the top 25 percent of total family incomes in that year, earning $16,875 (or approximately $19,250 in 1974 dollars). This, of course, a very small elite, representing something on the order of 2.3 percent of the waiters and waitresses in full course restaurants in metropolitan areas of the U.S. Approximately 7 percent of the metropolitan waiters and waitresses in full course restaurants earn as much as or more than the median income for 1971 of $10,281 ($11,730 in 1974 dollars). Just over 15 percent earned 85 percent of the median income in 1971 or $8,520 (in 1974 dollars, $9,700); while 40 percent earned 60 percent of the median income or $6,500 (in 1974 dollars, $7,400). Over half of these servers earned well over half the median income in 1971 or $5,600, which is approximately $6,400 in 1974 dollars (19, 2). Clearly, then, there are a sufficient number of service jobs to be had that offer a reasonably adequate compensation to make study of this work role of interest to the ultimate clientele of this project, the Commonwealth's students in vocational-technical programs in years to come.* Beyond considerations of total income earned, these jobs also offer the advantages of ample part-time work opportunities, which are of interest to persons, like mothers and students, who cannot or do not seek full-time work.

Finally, we have seen in Chapter 4 and in Volume II that, to a substantial degree, the restaurant industry of the future will be displacing culinary skills. This is not to suggest that preparation employees would go unemployed but it does suggest that the number of skilled positions in the future may be predominantly service positions as centralized or simplified production become the rule.

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*Calculations in this paragraph are based on the assumption of a forty hour work week, fifty weeks of the year.

The balance of this chapter will review the traditional concept of the server's role as reflected in the training of the server. Attention will then shift to factors suggesting that the traditional service roles are in a state of decline and to the identification of the continuing needs of the service role in a state of flux. Finally, the chapter will conclude with a brief review of a new perspective towards server preparation which would define the server's role in a more positive light based on the emerging notion in paraprofessional training of the helping skills.

The Traditional Service Role

The traditional server role is that of the waiter which evolved out of a European social structure characterized by substantially greater degrees of social stratification and greater acceptance of the outward signs of that stratification than has been typical of American society.

The European System

Bock (3) describes his early training in the apprenticeship system of Europe. In his early teens he was apprenticed to a restaurateur, his only pay being the clothes that he needed. For three years he attended a trade school for as little as four hours a week and spent the rest of his time performing menial chores--and learning his trade through practice--under the direction of the restaurateur. At the completion of his apprenticeship, at an age not much younger than the typical American high school graduate of today, he was ready to become a "journeyman"--and the term was taken literally. The journeyman went out into the world to work in various settings to acquire experience and polish, and to learn the tricks of the trade. In doing so the waiter joined a worldwide fraternity of professional waiters. Thus, for instance, the International Geneva Association, founded in Switzerland in 1877, had, according to Bock, many thousands of members in all parts of the world at the end of World War II.

The European waiter who eventually came to America was very commonly bilingual and even trilingual. Thus, Bock went to London and began working for room and board in a boarding house, doing whatever jobs needed to be done in return for the opportunity to learn English. He then moved up to a better class boarding house to polish his English further; then he moved to a relatively unsophisticated restaurant; and gradually he arrived at the point where he was able to work in one of London's finer restaurants. He then moved to Paris and began the entire process over again and then, on coming to America, he began the process a third time in New York, moving more swiftly because of his previous experience and linguistic abilities. At the end of this six or eight years as a journeyman, the waiter would be ready to settle down and, indeed, would be ready to consider himself a "professional."

A perceptive student of the food service industry, writing over a quarter of a century ago described two factors which were even then bringing traditional service models into a state of crisis.

> While there were exceptions, it was generally assumed that the European son would follow in his father's footsteps. The son of the waiter expected to become a waiter himself. He did not expect to be the equal of the people he served. Rather he expected to gain his satisfactions through serving them well. And, equally important, his customers took his position for granted. They did not need to ask him why he was not something better than a waiter. The position he inherited fitted into the natural order of things.
>
> Then, too, the waiter's calling enjoyed greater prestige in Europe. In a society where the humble classes could expect to get along in the world primarily through pleasing their "superiors," the waiter's job would have a better place than in a society, like our own, where it is felt that all men are created free and equal, and no man looks forward to waiting on others. In our country, of course, social distinctions are recognized, but they are resented.
>
> Some supervisors report that they have difficulty in instilling the proper deference for customers into the waiters. There are even many foreign-born waiters who have been in this country long enough to

break away from old-world practices and do not like being classed as servants. If that is true even of immigrants, we can predict that managements will face a much more serious problem if they try to fit the American-born into the European-waiter pattern.

This status problem is seen from another point of view when we consider recent changes in American food habits and dining customs. An experienced waiter discussed the problem in this way:

"I worked in the old country, you know. I learned a lot of things over there. In that country, waiting is a profession, not like it is here. For one thing, we start at the bottom as an apprentice, and we learn from the ground up. We learn everything there is to know about running a restaurant. Then, when you get to be a waiter finally, it is a very different job from this one over here. If I knew that waiter work was going to turn into this sort of thing, I would never have started into it in the first place.

"When I started this, it was a profession. You had to have a lot on the ball. You had to know how to mix dishes at the table. You had your own sideboards. It was altogether different from the way it is here. This mass production stuff, I don't like it. Everybody in a hurry. It is not a profession at all. It's more like a machine."

The waiters to whom we talked were making far more money than they could have hoped to make in Europe, and their earnings have risen steadily in recent years. But we find in this

> case, as in so many others, that material rewards make up only a part of the worker's motivation. The waiter's job has fallen in status. Experienced waiters find it difficult to adjust to this decline, and new men are not likely to seek out the job if they can find any other kind of work. (22)

Service Training: A Mechanical Focus

A review of waiter and waitress training manuals presently available suggests a very substantial concentration in training on the mechanical aspects of service. A simple comprehensive guide to this subject matter is found in The Essentials of Good Table Service published by the School of Hotel Administration at Cornell University (1). Its review of the duties of head waiter, hostess, waiter, and waitress concentrate almost exclusively on duties designated by the formal organization and mechanical considerations. Extensive attention is given to the various kinds of service (American, French, Russian, banquet, buffet, wine and bar). The format found in this publication appears in various adaptations in other texts and training manuals on the subject. In many ways, its focus is surprisingly similar to that found in a much earlier publication codifying the practices of the hotel dining-room in the twenties (12). While no empirical validation for the notion comes readily to hand, this writer's experience with server training suggests that the attitude found in server texts is found, as well, in the organization of service training in general in the restaurant industry. Thus, an examination of the viewpoint as well as the material presented in texts for mastery by the student gives us some clues as to the approach to be found in service training.

The mechanics of service provide the principal focus of service training. Extensive descriptions of what course is served on what kind of plate is the centerpiece of training manuals and of industry-run server training efforts. While no one can question the appropriateness of this subject matter nor its high priority ranking, as a focus of training it is deficient because of its exclusive concentration on "what" with only passing attention to "why." Thus, one manual devotes a half page to "Setups for Special Dishes" and includes discussion of setups for serving Cold or Hot Lobster and Langouste, Caviar, Oysters and Clams, Whole Grilled Snails, Fresh Fruits, and Fresh Grapes. An example may suffice to suggest the tone:

> Whole Grilled Snails: Hot dinner plate, snail fork, snail tongs, butter plate and butter knife, and finger bowl are needed. The snails (fried in the shell and then arranged on a bed of heated salt on a silver platter) are placed in the center of the table. The snails are picked up with the snail tongs by the guest and are eaten with the special snail fork. This delicious light lunch is served with toast. (1)

Where information on "what" is coupled with information on "why," it is supplied in a way which has little to do with the server's motivation:

> The Correct Way to Hold Plates
>
> Plates should be held with the thumb, index finger, and the middle finger. The upper part of the plate's rim should not be touched; this prevents fingers from getting into the soup or leaving marks on the plate. (1)

No suggestion is intended that this information is irrelevant--just that it intrinsically related to the server's motivation. The focus is on plates--not people. This distinction will become clearer when we discuss the server-guest interaction in terms of reinforcement theory. Basically, people are seen as more reinforcing than plates--and thus more motivating.

When the positive function of relating to the guests in a helpful way is brought up writers--again mirroring behavior in the field--become vague and general, and they often combine this fuzziness with a condescension that "puts one off" from this role. Thus, a definition of courtesy found in several texts follows:

> To be courteous is to be:
>
> | | |
> |---|---|
> | Polite | Gracious |
> | Affable | Civil |
> | Suave | Obliging |
> | Gentle | Well-behaved |
> | Genial | Well-mannered |
>
> You must be all these things at all times to be truly courteous. (13)

After describing a restaurant that does have all the correct mechanical activity related to service, another writer says,

> But a little something is missing--the human touch. A customer would never know whether the meal was served by a machine or a man. Mechanical efficiency isn't everything. A note of cordiality adds a little glow. Act as though you really care whether the guests are enjoying their food. Their response will amaze you. (6)

One has no quarrel with this advice except that it is rather difficult to take from it specific behaviors to be followed.

In defining the relationship between the server and the guests, still another writer expresses that relationship in terms of the server's dependency. In a chapter titled "You and Your Guests" this writer begins,

> Who is the most important person in a food service establishment? If you will stop to think about it, it is not the manager, not the cook, not the waitress, but the guest. Without guests there would be no hotels and restaurants and no jobs for waitresses. (20)

Once again, there is no quarrel with the statement but the implicit negativism--"you better be good or else"--may not be the most effective means of securing the wholehearted entry of the potential server into the role. Another author writes, "Food service is no field for the rugged individualist--conformity to house rules is the first 'must' in the book" (16). While no one can doubt that following the rules of the work place is important, this is hardly a characteristic reserved to the server. But the attitude of the traditional service establishment towards the server mimics the condescension of the aristocratic guests who were served by the precursors of present day waiters and waitresses. Indeed, either consciously or unconsciously, many members of the present generation may find themselves tempted to turn away from the requirements of the role even if they find it economically necessary to take the job.

Substantial attention in texts and manuals is given to the memorization of menu terms in both French and English. Thus, Good Table Service includes a glossary of over 150 French menu terms. This is by no means a maximum. A current English text devotes 22 pages to the chapter on "Menu Knowledge," which includes consideration of names, seasons of the year in which the food might be served, the appropriate menu terminology, and a five-page "Glossary of French Menu and Cooking Terms" (17). While this preoccupation with terms is rather more extensive than that found in America or Canada, a seven- or eight-page glossary of terms for memorization is not unusual (13, 15, 16, and 20).

Attention to the mechanical aspects of service or, indeed, to the knowledge of the terms in the better grade of restaurants is certainly not irrelevant in preparing for a career as a waiter or waitress. On the other hand, exclusive concern with these subjects--together with a portrait of the work as subordinate and dependent--tends to draw the focus away from an important component of the work being done, which is the interaction with the guests in a pleasing manner. There are grounds, moreover, for believing that the server's subordination is overstated by this school of thought.

The Server in Control

While the mythology of service found in server's training manuals and commonly echoed in the training systems in the industry expresses the server's role in terms of subordination, dependency, and low status, a penetrating analysis of the server role by the anthropologist William Foote Whyte provides us with a quite different view.

Whyte's work was accomplished some thirty years ago in a study sponsored by the National Restaurant Association. Studying service then, Whyte pointed out,

> The first point that stands out is that the well-adjusted waitress does not simply respond to her customer. She acts with some skill to control their behavior. The first question to ask when we look at the customer relationship is, 'Does the waitress get the jump on the customer or does the customer get the jump on the waitress?' The skilled waitress realizes the crucial nature of this question. . . . The skilled waitress tackles the customer with confidence and without hesitation. The relationship is handled politely but firmly and there is never any question as to who is in charge. Most customers react favorably to this approach. (22)

A more recent anthropological study of server behavior confirms this observation (21). Whyte noted that girls with "some leadership experience--with some experience in taking the initiative in human relations--would make the best adjustment." In a sense then, the server is the guide in the service environment. As such, it is his or her responsibility to provide a service to the guest. In providing that service, the server can be warm and friendly or cold and aloof. In other words, the server sets the tone for the interaction.

In addition to the importance of being able to take control--and do so subtly, so as not to offend the guests--Whyte emphasizes the importance of the ability to work with other servers, emphasizing the significance of exchanging favors and teamwork (22). And this observation is, again, supported by a more recent study (21).

Service in the Restaurant of 1985

Just as in Chapter 4 it was emphasized that all of the restaurant types presently found in the industry would probably be in existence in 1985, so also all of the server roles currently in existence will doubtless also be found. But, just as in Chapter 4, the emphasis will probably lie on the more innovative and less formal system so that the predominance of server roles at that future date may well be found in the less traditional molds. The significant finding of the Patterson study in Volume III lies in the difference of the relative significance of the server as an individual in two different restaurant settings. Patterson compared guest reactions to a number of factors measuring various facets of the food, service, and environment in three quite different kinds of settings labeled "French Restaurant," "Truck Stop," and "Fast Food."

In the French Restaurant, modeled as it is on the European tradition, the server is seen as a more significant determinant of the evaluation of service than in the Truck Stop. While no one would suggest that all the restaurants of 1985 will be "truck stops," it seems reasonable to suggest that the restaurant of the future will be closer to the informality of this establishment than to the formality of the French Restaurant. In the French Restaurant, the server's role and the guests' role are both so tightly defined that the server's individual behavior is not as significant. The presentation of self in the Truck Stop's more informal atmosphere affect the success of the dining event in Patterson's study significantly more.

Nothing in these remarks suggests that a server who is competent in interpersonal dealings but incompetent in "bringing the dinner" would be a success. Nor is there any suggestion from any other standpoint that mechanical competence is unimportant. What is suggested, however, is that the emergence of less formal dining establishments makes the server's ability to present himself as interpersonally effective is a substantially more important skill than in the traditional restaurant with its tighter, European role definitions.

Helping Skills: An Affirmative Model

The traditional approach to service has been shown to have a mechanical focus and a relatively negative and unduly subordinate view of the server's role in the dining event. When the traditional approach does consider the guest, it does so in a rather vague manner that provides few specific behavioral cues. This section will consider a more positive, person-focused way of regarding the interchange between server and guest provided by work done in other areas of Human Service Training under the heading of "helping skills."

The helping skills grew originally out of the work of psychotherapists who "identified the core conditions which one must possess in order to be helpful such as emphathetic understanding, positive regard, and genuineness" (7). While the earliest use of these techniques was in therapeutic relationships in which the interpersonal contact was the essence of the relationship, the skills have been adapted to other service settings in which service is the principal element of the interchange, but in which the interpersonal style provides a significant and potentially positive element in the interchange.

Cooper and Oddie (4) report on an attempt to use interpersonal training in roadside restaurants in Great Britain. They suggest that there are two approaches to group training in a service industry. One of these "stresses the social rather than the skill aspect of interpersonal interactions." Such training experience is based on the T-group approach fostered by the National Training Laboratory. A disadvantage to this technique of training is that it often borders on forms of psychotherapy and requires very substantial personal skill on the part of the trainer. As one writer on this subject put it, "The increased popularity of these groups with the public at large has resulted in some T-groups being led by inexperienced leaders wanting to do their thing to people instead of with people," (8) Under the circumstances it would appear that this would be a very ambitious model, indeed, to adopt in food service education.

A second model emphasizes "primarily" skill training. This model assumes that social skills are acquired in much the same way as motor skills--one learns to get on better with customers and colleagues by similar methods as one learns to drive an automobile (4). Interpersonal verbal and non-verbal behaviors, we like to think, arise out of "the kind of person I really am." But the evidence indicates that such behaviors as eye contact and face and head or hand and arm movements are learned behavior--and subject to re-learning. In the British study cited here, superior results were shown for the T-group approach. But this success appears, in the data found in the study, to be as much a result of the technique of the trainers as the training system employed. In any case, as noted above, the extreme sensitivity encountered in T-group work and the very high skill level required of the trainer make it a model difficult to adopt in the food service industry.

Fortunately the skills approach has been tried in other human service areas and proven successful. Thus, Danish reports successful training experiences with not only professional counselors and psychiatrists, family planning counselors, social workers, and crisis center personnel, but also with nurses; physicians; dentists; lawyers; police; general human service workers with bachelor's degrees, A A degrees, high school diplomas and less; college undergraduates; college residence hall personnel; hospital aides; nurses aides; model cities personnel; new careerists; teachers; teachers aides; and parents. "These diverse groups share one common element--their central role of being 'people helpers.'" They are providing a service to people, a service in which their interpersonal skill level can make for a more successful exchange. "This one criterion should primarily determine whether the helping skills program can be an appropriate experience for potential trainees" (7 and 9).

Six skills are presented in the program advocated by Danish. "The characteristics of these skills stipulate that (1) they are among the most basic skills necessary in effectively helping others; (2) that they can be defined in terms of behavior; and (3) that they are readily teachable" (9).

It is clear that servers do, indeed, help people. Because of the traditional orientation of this role, their formal training has traditionally been confined to physically helping the guest; and yet informal observation suggests that the manner in which the servers present themselves is also important. Patterson's study, noted earlier, suggests that this will become an increasingly important element of service as settings become more informal. Thus these are clearly relevant skills for servers. They are, moreover, presented in a format that lends itself better to teaching than the vague suggestions of the need for "the human touch." As Danish suggests, the format he advocates "is consistent with the learning of other skills--and general instructional principles" (8).

Specifically, the process of skill training presented by Danish involves the following steps:

1. The skill is defined in behavioral terms.
2. The rationale for the skill is discussed.
3. A skill attainment level is specified.
4. Models are used to demonstrate both effective and ineffective examples of the skill.
5. Opportunities for extensive supervised practice of the skill are given.
6. Homework is assigned to assist in the generalization process.
7. An evaluation using behavioral check lists and peer and trainer feedback is conducted to determine whether the attainment level has been achieved." (9)

Danish specifically points out that, in considering the role of the trainer "the focus seems to have been on empathy. It is my experience that too little emphasis has been given to the importance of the role of trainer as a manager and leader in skill training" (8). His argument firmly suggests that the skills involved here are those that might be learned by food service instructors (and many others) without the necessity of developing a high degree of appreciation of the psychological intricacies appropriate to T-group work.

In the discussion that follows, a brief summary of a trainee's workbook developed by Danish is presented. It should be recalled that this trainee's workbook is used in training paraprofessionals in many human service settings including those of psychological counselor. Thus, it seems likely that significant adaptation would be required before the approach outlined here would be appropriate to servers. It may be useful to distinguish between helping relationships of a high risk nature in which a non-emphathic, unsuccessful interaction may be disastrous--police, psychotherapists, social workers--and the relatively more low risk helping relationship of the server in which a cold, unfriendly interaction between the server and the guest may be unpleasant but hardly disastrous. The analogy bears exploring because, in a way, a successful dining event may be thought of as kind of "therapy for the healthy." The helper-server renders assistance in the enjoyment of the dining occasion in a role that continues to be highly structured by the mechanical and formal requirements of the situation such as taking the order and bringing the food.

Thus, the summary below is suggestive of a model for adaptation rather than of a model that should be adopted at once and entirely.

Helping Skills: A Summary

Danish and Hauer present a six stage approach to training a helper (6). The first stage has the goal of becoming aware of one's need to be a helper. This involves exploring the ego gratifications available to the helper so as to move away from altruistic and unrealistic statements of the reasons for one's interest in the work. In thinking about this stage for the server, it may be appropriate, too, to suggest an exploration of the kinds of personal (non-monetary) rewards a server may gain from his work. Making other people happy _is_ a very rewarding experience.

Stage two focuses on using effective non-verbal behavior including, specifically, eye-contact, postural position, and verbal quality. Thus,

> [G]ood eye contact consists of looking at another individual when he is talking to you or when you are talking to him. Eye contact should be spontaneous glances which express an interest and desire to communicate further.

> Poor eye contact consists of never looking at another individual; staring at him constantly and blankly; and looking away from him as soon as he looks at you. (6)

Stage three focuses on using effective verbal behavior. The goal of this stage is "to exhibit effective verbal response behavior in interpersonal situations. Effective verbal response is the ability to accurately distinguish and use different categories of response." The two major response types are the continuing response and the leading response. The continuing response serves as a reinforcer for a person to continue talking and may also help to clarify for the speaker what it is that they are saying. The simplist kind of continuing response identified would be the simple affirmation, "Mm Hm," which serves the function of stating, in effect, "Continue, I'm listening, and I understand." Another kind of response--called a "content" response--might occur if a guest at the end of a long, hard day is choosing between remaining on his diet and having a martini before dinner. A "helpful" response (rather than a hard sell) response might follow the following pattern:

> Guest: I really don't know. I've had such a bad day. The boss was mad at me, the phone rang all day, and my secretary was out, and I couldn't find half the things I needed in the files. My doctor says I ought to lose weight, but I really feel like I need a little something to unwind tonight.

Server: It sounds to me like you're making a choice between a little soothing now and having to give up a few calories later.

The most difficult of the continuing responses is the "affective response," which deals with feelings being expressed by the person speaking. The situation presented by the Smiths at "The Voyageur" and responded to rather effectively by Vikki in Chapter 4 may be suggestive of the kind of interaction if not the specific content.

Leading responses include those of influencing and advice giving. The kind of influencing that a server would engage in is clearly different from the kind of influencing a psychotherapist would engage in, but the importance of the ability of each to influence his client is very similar in a relative sense. Much the same can be said for advice giving. The advice in a choice between Dover sole and filet mignon is clearly of a lower risk than that found in many other helping roles; but again, in terms of the work of the server's role, it constitutes an important kind of behavior.

Stage four concerns itself with using effective self-involving behavior. It is at this point that the model appropriate to the server and the model developed by Danish begin to part most dramatically. The kinds of self-involving behavior appropriate to a server might involve expressing interest in and empathy with a guest who's had a hard day; expressing sympathy and concern over a dish served that was in some way inadequate; or in other ways expressing to the guest, believably, the server's interest in his welfare and enjoyment during his visit to the establishment.

Stage five concerns itself with understanding another's communication. The goal of stage five is "to learn to listen effectively and accurately and to accurately understand others' communications." Thus, Vikki, in Chapter 4, appeared to have picked up some verbal and non-verbal cues that suggested certain needs of the guests. And she responded to these at the same time that she was accommodating the formal requirements of the operational system. Danish's discussion breaks down the process of understanding others' communications in terms of specific behaviors exhibited by others based on a behavioral index that lists a number of behaviors divided into several categories. "As you try to understand others," he says, "be aware of their various behaviors and rate the behaviors using the words (in the index) as a guide."

"At the completion of the behavior index, you should be aware of a number of behaviors others use. The process of understanding another individual involves taking all the behaviors you have noted and organizing them in a meaningful way." In stage six, which Danish calls "Establishing Effective Helping Relationships," the various skills that have been learned to this point piecemeal are, in effect, "put together" in the form of appropriate, practical behaviors.

The means of practicing available are highly varied. They include the extensive use of cases, films, role playing, and other forms of simulation to work through difficult situations that may present themselves (8). As appendices to this chapter, we have reproduced the "Understanding Guide to Behavioral Index--Part A" and "Understanding Guide Descriptive Organizers--Part B." It is again essential for the reader to keep in mind that this specific text was developed for other users and serves as a model only in a very general way.

In developing applied helping skills training programs, Danish has built on the basic learning activities outlined above with various kinds of simulation including role playing and the use of audio visual simulation like stress training films (8).

As noted earlier, there are some elements of the model developed by Danish missing from the model that would be appropriate to the effective training of servers. These would be skills peculiar to the needs of the restaurant industry. One of them would be an ability to deal with tension-producing situations of the kind found in the restaurant industry. Whyte and Hamilton (23) point out that interpersonal strife in food service work groups may well be related to the chain of tension that anyone experienced with food service operations is aware of. It has been described by Whyte as follows:

> Timing and coordination are the keynotes of the operation. If the customer does not get his food when he wants it, he is upset. If the waitress cannot get it from the service pantry she chafes at the delay. And so on down into the kitchen. A breakdown anywhere in the chain of production, transfer, and service sends repercussions throughout the entire organization. No one can fail to feel its effects. The restaurant is an organization made up of highly interdependent parts. (22)

Another kind of behavior that appears to be especially important to tipped employees might be called "sizing-up" behavior. If the server, who is dependent on tips for a significant part of his income, is to interact effectively with a guest, it becomes necessary for him to meet and size-up a complete stranger in the very brief moment that they first interact. As noted earlier, observers emphasize the importance of the server control in the relationship, but exerting this control is based on not just the server's behavior but the needs of the guest at that moment as well. Thus, this sizing-up behavior, which Davis (10) in a study of cab drivers points out as a key behavior in these tip dependent employees, becomes an important diagnositc skill in "helping" the guest relax and enjoy the meal. (Analagous to this might be a learned skill in overcoming bashfulness.)

Still another important skill of the server might be called "attending" behavior. This consists of paying attention to programmatic and behavioral cues given by the guest's behavior as to what he will require next. Thus, for instance, a programmatic cue is offered when the guest finishes his first course: he is ready for the main course. A behavioral cue commonly seen is a guest looking around a dining room trying to "catch somebody's eye"--clearly in need of service. Interestingly enough, this brings us back to mechanics.

"Mechanics" in an Interpersonal Context. It is worth returning to "The Correct Way to Hold Plates" (1) for a moment. The advice found there, it will be recalled ("The upper part of the plates' rim should not be touched; this prevents fingers from getting in the soup.") is perfectly reasonable. The fault found was the focus on the plate rather than the guest. Clearly, however, a focus that begins with the guest does not leave out the mechanics necessary to satisfy the guest's wishes--to make the guest happy. It simply provides a human context for presenting these very important issues. Clearly, an interpersonal focus begins with the notion of helping the guest enjoy dinner--and moves very quickly to the various means, interpersonal and mechanical, to achieve these ends.

Another perspective for viewing these issues is that of reinforcement theory. Reinforcement theory suggests that rewarded behaviors are learned and repeated. (Positive reinforcement supports learning.) If the goal taught as the appropriate one to be sought is mechanical perfection in service and since "the plate" doesn't offer much in the way of reinforcement, the server must internalize some pretty strong self praise to gain significant rewards from "holding the plate correctly" or whatever other set of physical-mechanical behaviors are called for. On the other hand, if the goal is defined as pleasing the guest, then effective behaviors are likely to be reinforced. Providing a pleasing dining experience is generally a rewarding experience to servers. Reinforcement theory suggests that this would be a superior teaching-learning strategy--and one that would reinforce the appropriate mechanical steps necessary to pleasing the guest.

Implications for Curriculum Planning

Doubtlessly, in adapting the helping skills model to the food service industry, numerous other skills should be identified. Moreover, as suggested in Chapter 5, there are other kinds of helping relationships for employees who are not tip dependent but who nevertheless would find substantially more emotional satisfaction in their work if they could perceive themselves as helping clients rather than just "serving them." Clearly, basic modules on helping skills should be developed with additional specialized modules that permit students to specialize according to their interests and abilities--as servers in congregate feeding settings or as waiters and waitresses.

One observation of Danish's is of particular interest.

> The point in time when the trainees receive the training is often critical to its success. It is suggested that training take place before the participants assume their actual helping positions. Most helping positions are established with the assumption that the person has already acquired helping skills prior to beginning work. If the trainees are already performing in their specific helping roles, it may be difficult for them to learn or relearn these skills. (7)

Finally, one small fragment of evidence that the helping model *is* a useful one is found in the fact that students majoring in Food Service and Housing Administration at Penn State University who took Dr. Danish's course related to helping skills and were also employed as servers reported that when they consciously employed the skills learned in the course, their tips rose by a significant amount.

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Appendix A

Understanding Guide
Behavioral Index

Check (if observed)

A. General Movements

1. Manner of walking (smooth, jerky) ____________________
2. Handshake (firm, clammy, weak) ____________________
3. Quality of smile (tight lipped, spontaneous, smirk) ____________________
4. Face and Head Movements
    a. Uses affirmative head nods ____________________
    b. Face rigid ____________________
    c. Calm, yet expressive use of facial movements ____________________
    d. Blankly staring ____________________
    e. Turning eyes away when another looks at him (her) ____________________
    f. Spontaneous and fluid use of hand and arms ____________________
    g. Not looking at other when talking ____________________
    h. Looks directly at other person when he (she) talks ____________________
    i. Extraneous facial movements ____________________
5. Hand and Arm Movements
    a. Spontaneous and fluid use of hand and arms ____________________
    b. No gesturing (arms rigid) ____________________
    c. Makes physical contact with other person (shakes hands, touches arm, etc.) ____________________
    d. Uses hand movements for emphasis ____________________

- e. Inappropriate arm and hand movements __________

6. Body Movements
   - a. Slouching __________
   - b. Relaxed posture but not slouching __________
   - c. Sitting in fixed, rigid position __________
7. Body Orientation
   - a. Body positioned toward other __________
   - b. Physically distant from person with whom talking __________
   - c. Sits close to person with whom talking __________
   - d. Not facing other with body __________
8. Signs of nervousness (excessive smoking, sweating, wet palms, foot shaking, restless, blushing) __________
9. Other (identify) __________ __________

B. General Appearance

1. Dress (flashy, plain, sloppy) __________
2. Height and weight characteristics (tall, heavy, short, well-built, thin) __________
3. Grooming (hair, nails bitten, cleanliness) __________
4. Handicaps (bad eyes, wheelchair, hearing aid, stutter) __________
5. Other (identify) __________ __________

	Minimum	Moderate	Excessive Use
C. General Verbal Response Pattern			
1. No Response	______	______	______
2. Content Response	______	______	______
3. Affective Response	______	______	______
4. Encouraging	______	______	______
5. Threatening	______	______	______
6. Advice Giving	______	______	______
7. Questioning	______	______	______
8. Self Involving	______	______	______
9. Other (identify) ______________	______	______	______

D. General Verbal Tone

1. Affect level (monotone, nervous laugh, warm, cold, happy, seductive, angry) ______________

2. Voice modulation (loud, soft) ______________

3. Voice rhythm (fast, slow, steady, choppy) ______________

4. Word usage (jargon, formal, psychologese, casual) ______________

5. Other (identify) ______________ ______________

Appendix B

Understanding Guide
Descriptive Organizers

1. Afraid ______
2. Anxious ______
3. Assertive ______
4. Caring ______
5. Conceited ______
6. Curious ______
7. Defensive ______
8. Friendly ______
9. Hostile ______
10. Hurt ______
11. Impulsive ______
12. Manipulative ______
13. Open-minded ______
14. Optimistic ______
15. Passive ______
16. Pessimistic ______
17. Rejecting ______
18. Reserved ______
19. Secure ______
20. Sensitive ______
21. Others (identify)

______________________ ______

______________________ ______

______________________ ______

IX

TOWARD FOOD SERVICE CURRICULUM PLANNING: SUMMARY AND CONCLUSION

IX

TOWARD FOOD SERVICE CURRICULUM PLANNING: SUMMARY AND CONCLUSION

Three basic forces interact to support a projection of substantial growth in the food service industry. These are growth in population, growth in income, and a sustained high level of educational attainment. As Figure 9.1 shows, population is projected to grow 15 percent from 1972's level of 209 million to 241 million by 1985. Under Standard World assumptions, consumption expenditures are projected to rise from $726.5 million in 1972 to $1,303.6 million in 1985 with per capita consumption expenditures rising from $3,473. to $5,410. This expectation appears in Figure 9.2.

Trends in sales of food, alcoholic beverages, and total sales in eating and drinking places are shown in Figure 9.3. Eating and drinking place sales rose from 35 billion in 1970 to 56.8 billion in 1985. Total sales of food consumed away from home are shown in Figure 9.4. These are projected to rise from 1972's $40.4 billion to a highest estimate of $75.6 billion and to a lowest estimate of $47.7 billion. The low end of the range is probably extremely unrealistic since it assumes a protracted (14-year) reduction of income gain accompanied by a protracted (14-year) unfavorable differential for the price of food consumed away from home as compared with all other prices in the economy. Total food consumed away from home, thus, would appear by 1985 to be in the range of sixty to seventy billion dollars.

Figure 1. Population

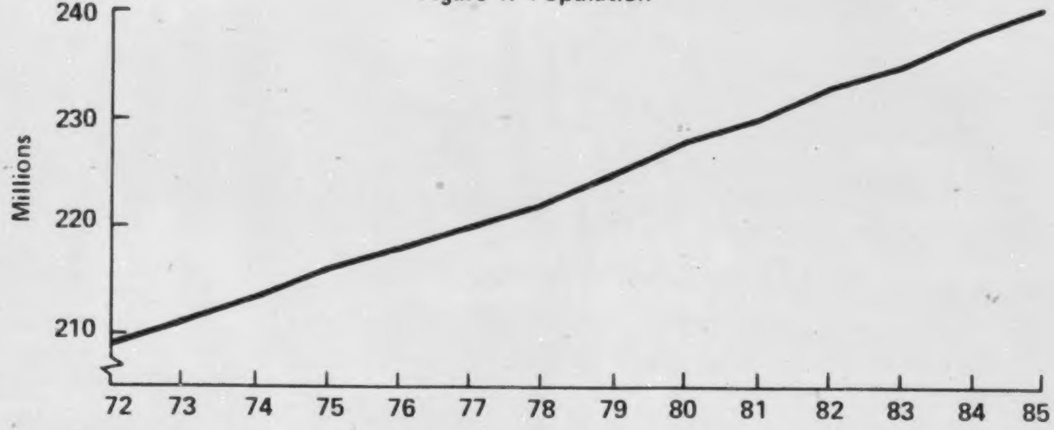


Figure 2. Personal Consumption Expenditures

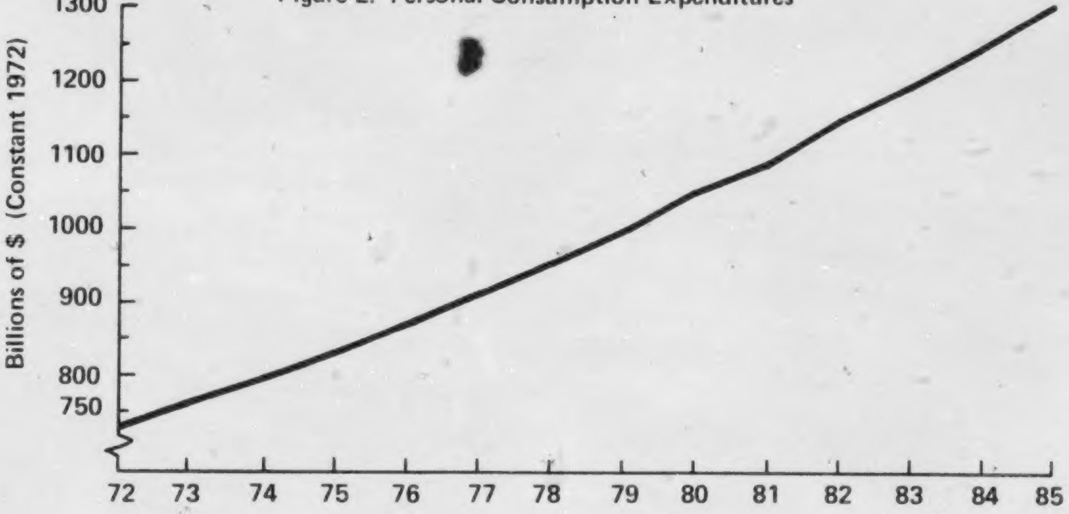


Figure 3. Sales in Eating & Drinking Places

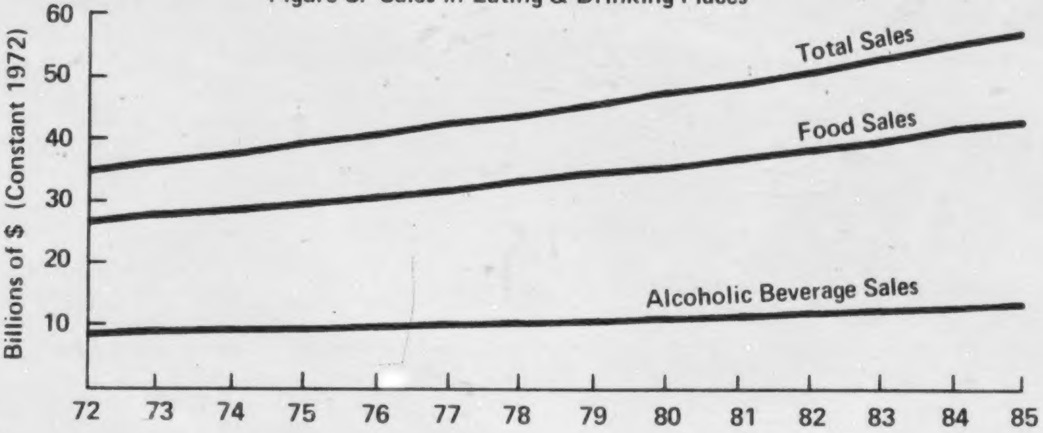


Figure 9.5 begins our consideration of employment trends in the food service industry. The food service work force, under all but the most pessimistic assumptions, will be in excess of six million workers, up at least 50 percent from the 1972 level of four million workers. The Standard World projection, which is perhaps the most reasonable one, suggests an increase to a level of 6.5 million workers.

Figure 9.6 suggests that the two largest groups of workers, by function, in the work force by 1985 will be--as they are today--production workers and servers. Figure 9.7 indicates that skilled and semi-skilled workers will continue to be the largest category of workers in the industry. Figures 9.8 and 9.9, however, present a slightly different picture. Here we see that production workers and servers will be growing substantially less rapidly than management workers and a group classified as "others." Examination of the jobs that makes up the "others" category reveals that these positions are almost entirely unskilled.

The largest growth will be in the area of management workers and unskilled workers, with the traditional skilled and semi-skilled group (although the largest on an absolute basis) demonstrating the slowest growth. Table 9.1 shows this information in another way. There the percentage of the food service work force made up by skilled and semi-skilled workers is shown falling from 59 percent of the work force to 52 percent of the work force, while the percentage

Fig. 4 Total Food Consumed Away From Home.

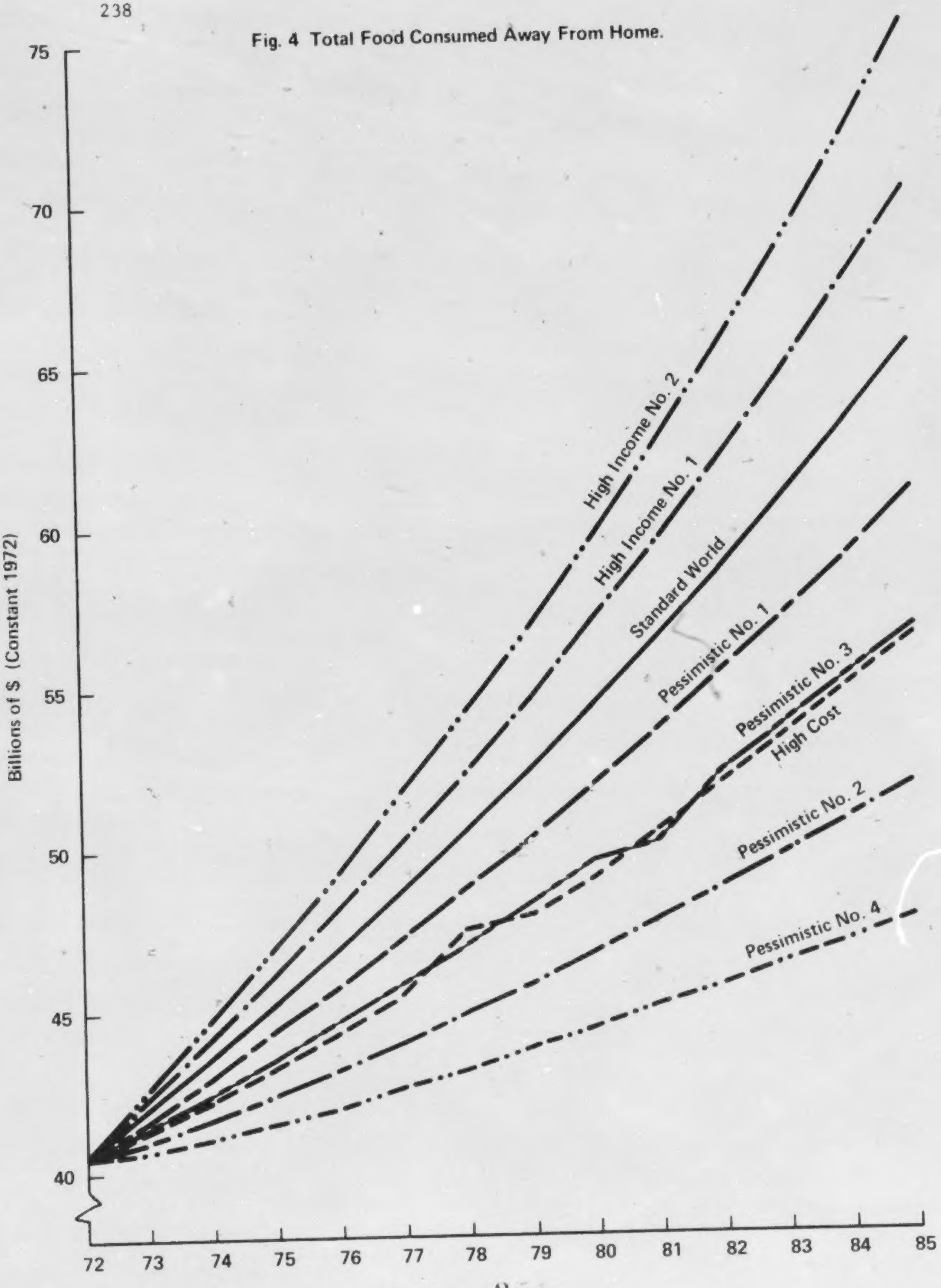


Table 9.1

Demand for Food Service Workers

by Skill Level

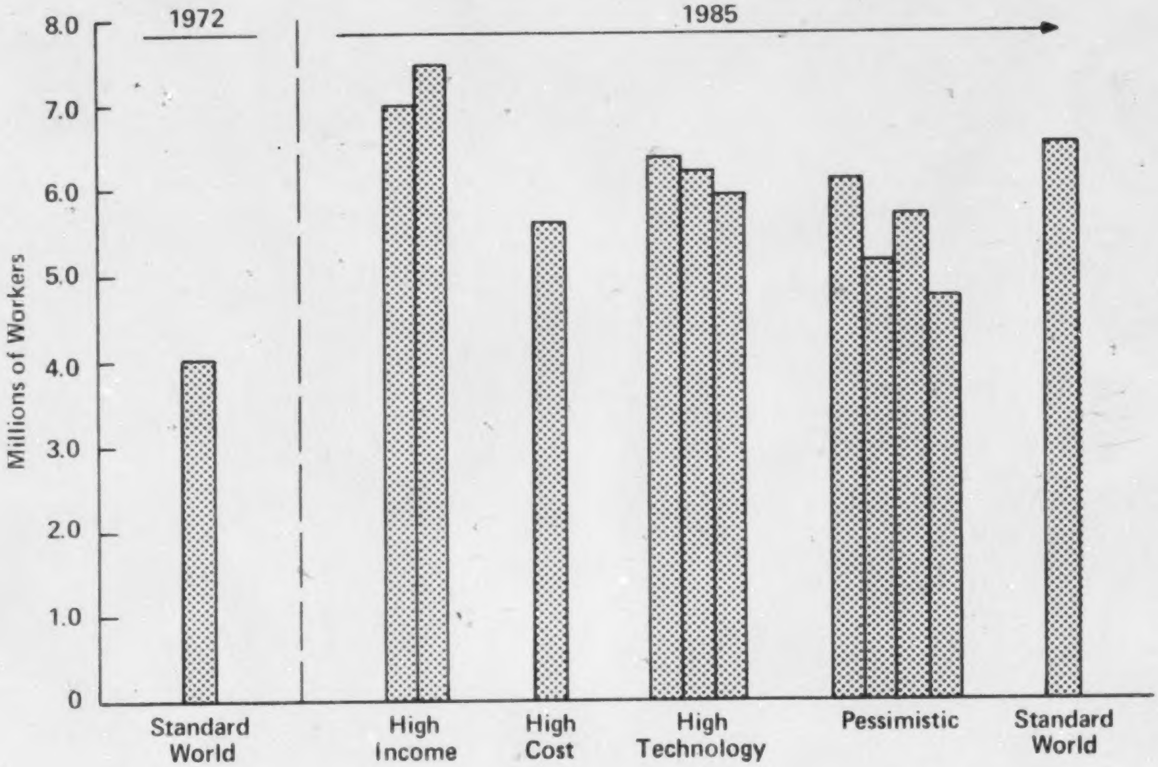
1972 and 1985

(000 omitted)

Skilled and Semi-Skilled Workers	1972 Number	1972 % of Total	1985 Number	1985 % of Total	% Change
Bakers	125		128		2%
Bartenders	205		340		65
Cooks	876		1317		50
Waiters & Waitresses	1152		1582		37
	2358	59%	3367	52%	47%
Unskilled Workers					
Dishwashers	214		267		24
Counter Workers	303		477		57
Bus Boys	119		195		
Others	454		1140		
	1090	27%	2079	32%	81%
Management					
Managers	515		986		
Dietitians	32		48		
	547	14%	1034	16%	89%
TOTAL FOOD SERVICE WORKERS	4014	100%	6520	100%	

Note: Based on Standard World Projections

Fig. 5. Food Service Employment - Total Food Service Workers By Scenario



of unskilled workers rises from 27 to 32 percent and the proportion of management workers rises from 14 to 16 percent.

Expected trends in work development have substantial implications for curriculum planners. First of all, it is clear that the traditional skilled and semi-skilled jobs will continue in large numbers. On the other hand, one of the fastest growing groups in the industry will be the unskilled workers. While many of these will be part-time young workers who enter the food service work force only while in school, it seems reasonable to suggest that the very rapid rise in demand for unskilled workers may lead to further upgrading of the wage level of these workers. Thus these positions will become relatively more attractive economically. Strategies of job enrichment, based on interpersonal skill training, both in the work place and in the school may help some poorer students find acceptable guest contact careers from the standpoint of both monetary and personal satisfaction. The absence of job enrichment will simply mean a continuation of high turnover in unskilled jobs.

Figure 9.10 demonstrates an important food service work force development. It seems quite possible, as a bare minimum, that there will be a nearly 50 percent increase in the proportionate size of government food service programs, and there is a very real chance that such programs will actually double their proportionate share of the food away from home market. In Chapter 5, the possibility of job

Fig.6. Food Service Employment - Number of Workers by Function of Worker-Standard World Projection 1972 and 1985

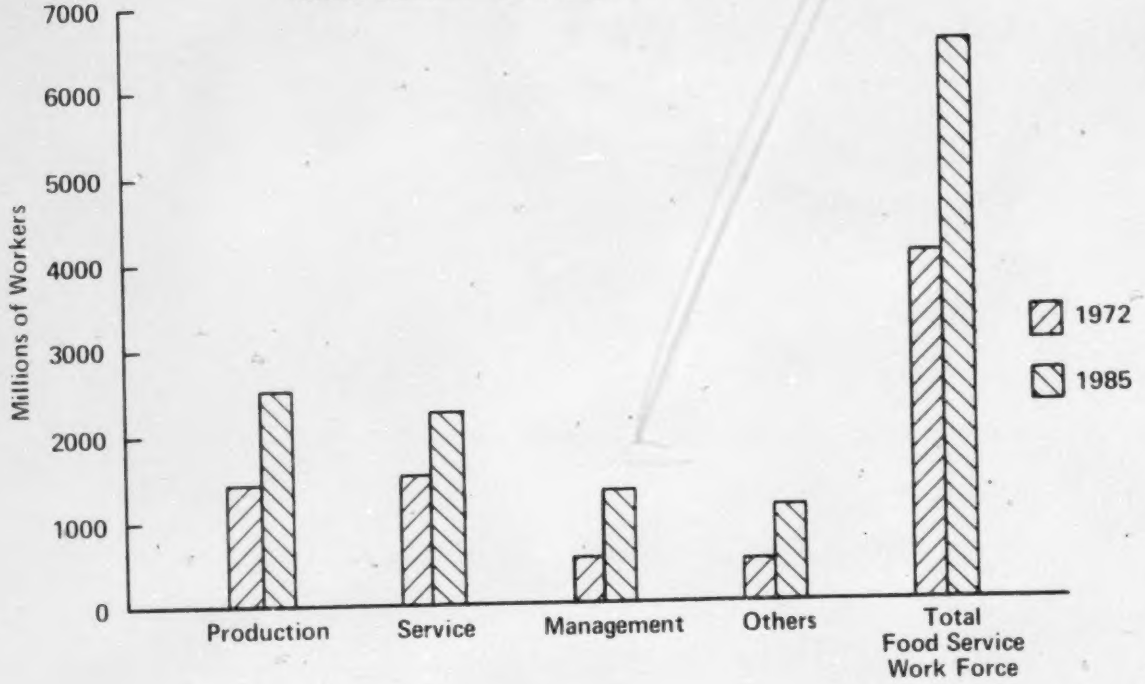
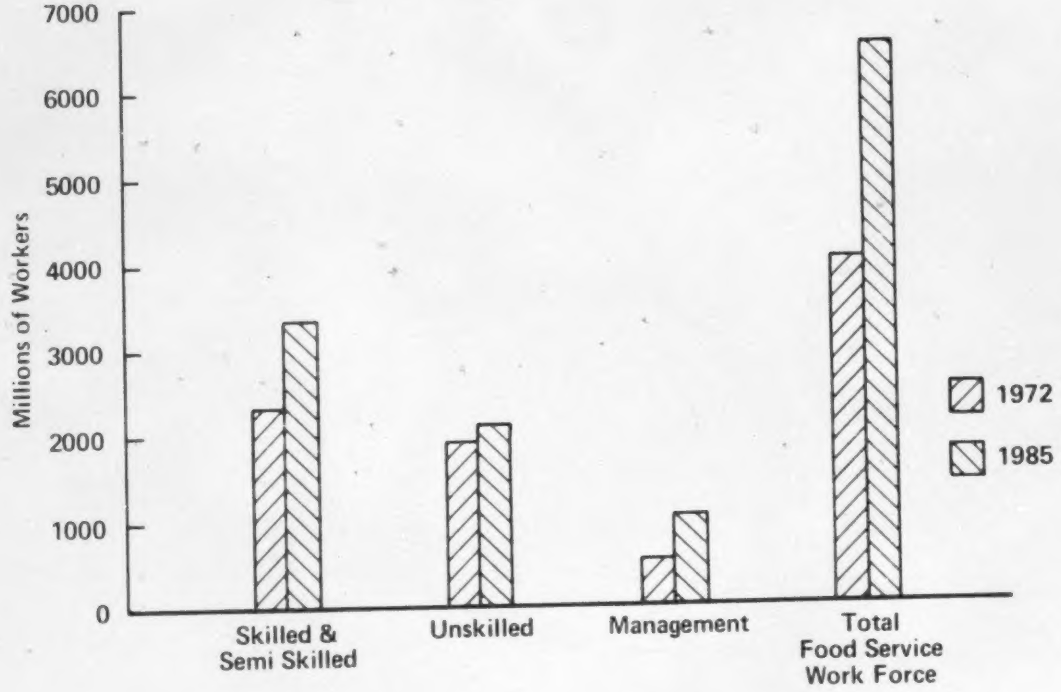


Fig. 7. Food Service Employment - Number of Workers by Type of Worker-Standard World Projection 1972 and 1985



enrichment for government food service workers through interpersonal skill training was raised. Employment in this area requires the worker to deal with people who are in "special" or "difficult" stages of the life cycle: the young, the very young, the aging, and the old. In feeding programs for the aging, the socialization of the clientele is a formalized part of the program's goals. Food service education can respond to this work place goal by providing students--before they enter employment and get their habits set--with the interpersonal skill experiences that can facilitate job enrichment in this area.

Another point of importance of workers in government food service programs would appear to be nutrition education. First of all, a knowledge of nutrition becomes, in a way, a part of the interpersonal skill base. If workers can urge clients in these programs to choose a nutritious diet from knowledge rather than because "you've got to eat everything on your plate," it would seem that they could do a more effective job of fulfilling the nutrition role explicitly stated for these programs. Moreover, in programs such as these, where at least 25 percent of the client's personal intake is provided, improper food preparation and handling techniques could lead to serious nutritional deficiencies even within a diet that, on paper, appeared to be "adequate."

It must be remembered, too, that many food service students will become food service managers a few years

Figure 8. Food Service Employment - % Increase by Function of Workers to 1985 - Standard World Project

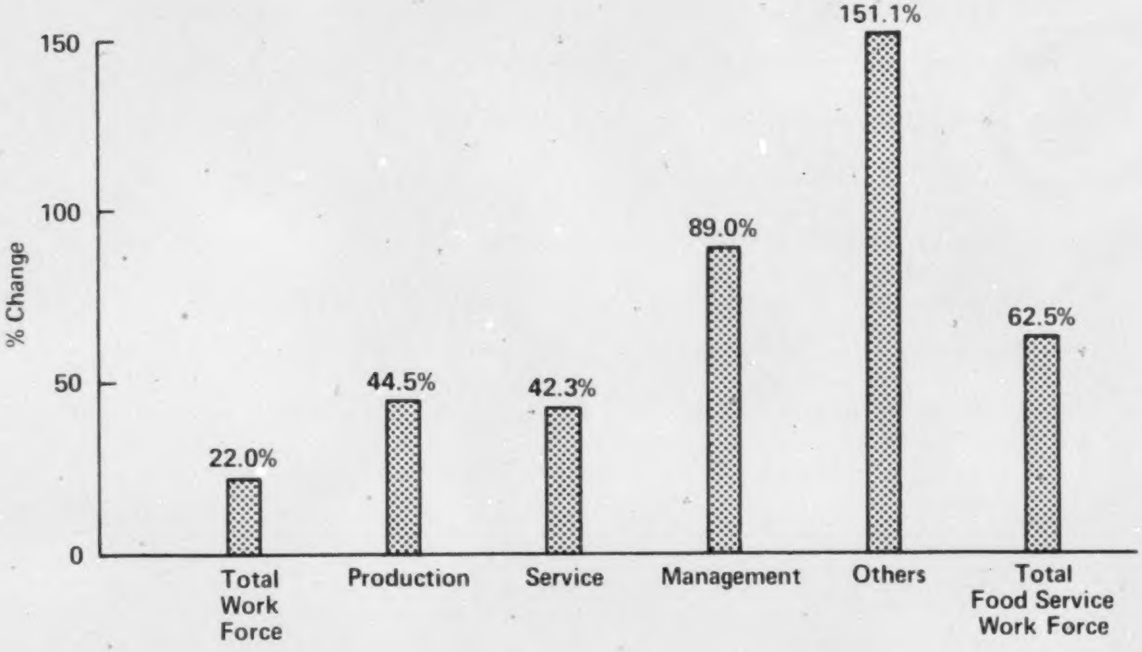
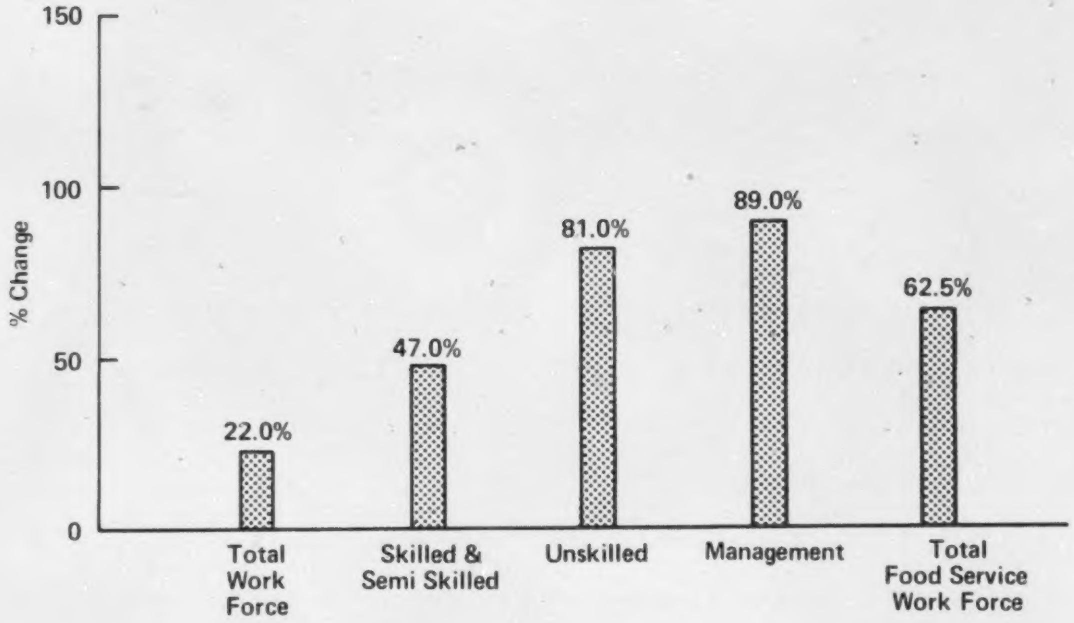


Figure 9. Food Service Employment - % Increase by Type of Worker to 1985 - Standard World Projection

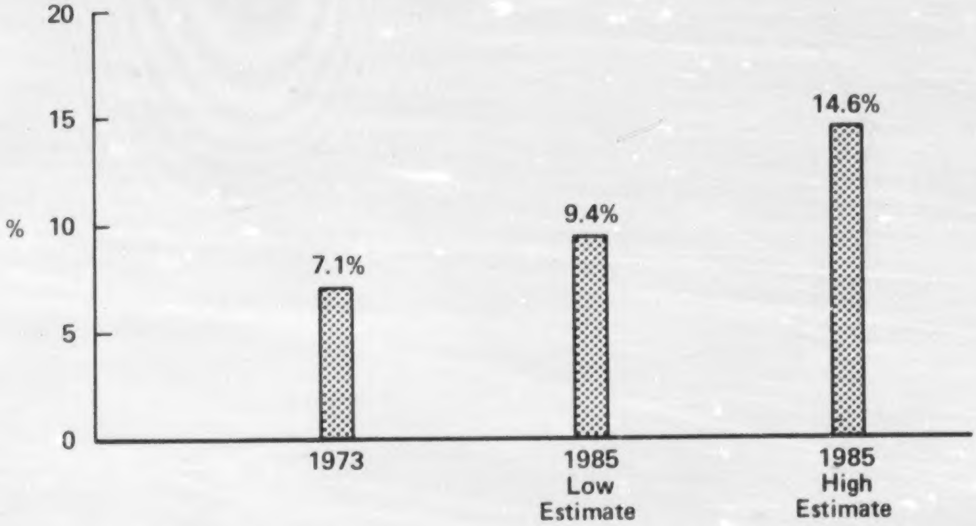


after graduating. Food service management in the public and private sector is likely to grow at very substantial rates because much of the growth in public sector food service will lie in entirely new programs in pre-school and congregate feeding. The responsibility for the client's nutrition is clearly greater for managers and supervisors than it is for food service workers.

The case has been made throughout this volume (and is explored in more detail in Volume II) that the move toward simplified food service systems and toward systems based on centralized food production is likely to continue at least at the same pace of growth as in the last 10 to 15 years, and it may possibly accelerate because of a shortage of skilled workers and increasing income levels. (It should be noted that the shortage of skilled workers arises not from an unwillingness on the part of educational institutions to engage in skill training but from a shortage of workers capable of being trained to appropriate skill levels who are willing to undertake the arduous and long training process--given the present income opportunities for such workers.)

The assumption that this move toward simplified food service and centralized food service systems will continue is supported by the employment projections. Very clearly, if food sales continue to increase and the number of skilled workers do not, as the projection suggests will be the case, it becomes necessary to continue the move toward food service systems that eliminate dependence on skill.

Figure 10. Proportion of Food Consumed Away from Home in Government Food Service Programs
(School Lunch & Related: Congregate Meals)
1973 and 1985 - High and Low Estimates.



This trend is reinforced by the economic advantages of centralized food service systems.

The "Truth in Dining" legislation that has been proposed is likely to give a substantial competitive advantage to operators who do prepare all their own food on the premises. On the other hand, given probable wage trends, it seems likely that the market will not expand at a rate any more rapid than the industry as a whole, and possibly less rapidly. The restaurant based on culinary skills is a restaurant that can achieve only marginal productivity gains since culinary skill implies (literally) manual labor. Consequently, all wage increases, without any offsetting productivity gains, must be passed on to the consumer. Inevitably, the prices at traditional restaurants will continue to rise.

On the other hand, it seems quite likely that "Truth in Dining" legislation, if passed, will lead some operators in the industry to adopt a strategy of promoting of their operation as a service intensive retail outlet for manufactured foods--manufactured, that is, either in their own commissary or by some supplier external to their firm. The principal means available of differentiating such establishments from one another (given relatively common standards for the food itself) are likely to be service, atmosphere, and location. Atmosphere and location lie in the province of the food service operator. But an important contribution in improving the ability of students entering the food service work force could be made by the school system, once again, through interpersonal skill training. Such training should provide a more positive focus for preparing students considering a service career for the pleasure of making people happy rather than for the mechanics of an etiquette imported from the courts of Europe. Moreover, using interpersonal skill training as a focus for teaching the mechanical skills of service provides a positive point of view for the server:

> Serving the food in this manner is one good way to approach making guests happy.

Thus interpersonal skill training is seen to offer motivational advantages in training servers in the mechanics of service.

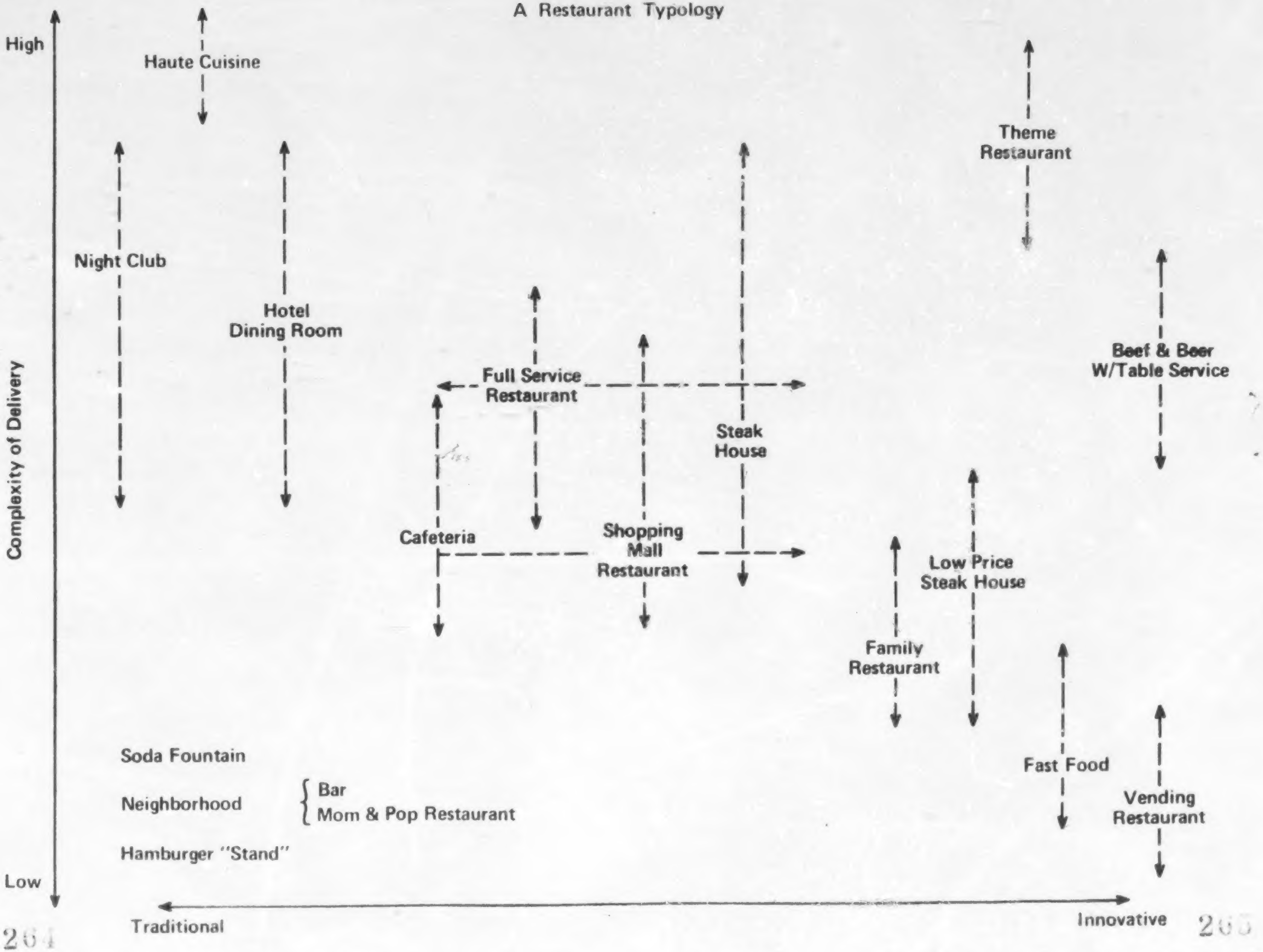
In both the restaurant sector and the governmental food service sector, knowledge of new foods and new food preparation techniques are important. Because of stringent program cost restrictions in government food service, new kinds of food based on soy protein will undoubtedly be introduced more rapidly there than in the restaurant sector. Students who are prepared to work in government programs need both a "current events" understanding of new foods and a nutritional understanding of those foods. Such an understanding will put them in a better position to play a positive role as change agents helping their clientele to accept these foods.

In the restaurant sector, the new foods may move in slower. But the increasing use of centralized food production facilities may be accepted more easily if food service workers are aware that food can be prepared centrally without significant quality sacrifice. Thus, for instance, servers who were educated to understand remote production as not necessarily equated with second rate food, would avoid "underselling" frozen or chilled prepared foods.

It is surely clear that there will continue to be a greater demand for qualified skilled and semi-skilled food service workers. Thus, the traditional skills base of the food service curriculum continues to be important. On the other hand, there will also be a very, very substantial growth in need for unskilled workers. The fact is that large numbers of students who are counseled into food service programs appear to be slower students. This suggests that an important goal for food service education may be in socializing these students to the world of work and, at the same time providing industry with an improved entrant into the ranks of the unskilled. Food service curricula can develop the means to respond to these needs, thereby rendering an important service to the student, the industry, and the guest.

Finally, the very rapid growth in the demand for managers supports the notion that the brigher students in the food service program _should be encouraged_ to prepare themselves for further study either in associate degree or baccalaureate degree programs. This substantial growth in the demand for managers--which is certainly in accord with current, 1975, developments--also strongly supports the continual rapid growth of associate degree programs and other post-secondary management programs.

Figure 4.1
A Restaurant Typology


High
Low
Complexity of Delivery
Traditional
Innovative
Haute Cuisine
Night Club
Hotel Dining Room
Theme Restaurant
Full Service Restaurant
Steak House
Beef & Beer W/Table Service
Cafeteria
Shopping Mall Restaurant
Low Price Steak House
Family Restaurant
Fast Food
Vending Restaurant
Soda Fountain
Neighborhood
Bar
Mom & Pop Restaurant
Hamburger "Stand"

Errata

The chart on the next page, first referred to on page 68 of this report, should appear after page 68.

Page 48, last line: delete "New" and insert "Standard."

Page 67, line 2: after "than it is" insert the phrase "to use a computerized system to do this transportation."

Page 79, line 23: insert "and" between "service" and "ambience."

Page 161, footnote: Josephine Marie Powers is a graduate student in Food Science, not a member of the FSHA faculty.

Page 206, line 8: add "is not" between "it" and "intrinsically."